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MEMOIRS
OF THE
AMERICAN ACADEMY.

II.

*An Account of the Magnetic Observations made at the Observatory
of Harvard University, Cambridge.*

COMMUNICATED
BY JOSEPH LOVERING,

HOLLIS PROFESSOR OF MATHEMATICS AND NATURAL PHILOSOPHY.

THE plan and occasion of the magnetic observations which have been made at Cambridge, under the auspices of the Academy, have been developed at length in a former communication. The observations which had been made previous to the date of that paper were then published. Since that time, a similar series, according to the same general system, has been sustained, at longer or shorter intervals, as circumstances permitted. The observations on the Term-days were made under the superintendence of Mr. W. Cranch Bond, the Astronomical Observer of the College. Those observations are not included in the present publication. They have already been presented in manuscript to the Academy, and will, I trust, be soon published, and distributed among all who are interested in these researches.

The observations which are here offered to the Academy, and through them to the brotherhood of magnetic observers, were taken during a period of a little more than a year, from the autumn of 1841 to the winter of 1842, as will be seen by reference to the printed records. It was not expected, at the commencement of the work, that observations would be made at Cambridge on any but the regular Term-days, since all the time that could be given to this object was only what the observers might be able to spare from their ordinary labors. At the suggestion of Professor Peirce, however, whose services to the Observatory have been invaluable, an Association was formed among members of the Senior, Junior, and Sophomore classes then in College, under the name of the Meteorological Society of Harvard University. By the help of this Association, observations were made on the Barometer, Thermometer, and the three Magnetic Elements, with the attached Thermometers, during the whole day and night, at intervals of two hours, one hour, or half an hour, as other duties rendered it convenient. The magnetic observations were made with the three instruments described at the close of my former communication, where the mode of observing is given. This Association was active for more than a year, and I am chiefly indebted to the zeal and diligence of its members for the materials of this paper. When we consider by whom the work was undertaken,—by students, who had little leisure to spare from their academic exercises,—by the young, who might be expected to seek more exciting relaxation than could be received from watching by night as well as day the vibrations of a steel bar,—and when we recall the care, accuracy, and spirit with which it was carried forward, we feel that the Academy, and that American science, are under great obligation to those young men who assumed voluntarily

the toil of midnight observation, and sacrificed to the cause of severe science the natural tendencies of their youth. How excellently the work was done will appear by an examination of the published results.

A few words will be needed to render the Tables generally intelligible, but they are reserved for another place. I will take occasion, however, to remark now, that the Vertical-Force instrument has not satisfied any observer who has used it, here or elsewhere. This may be owing, in part, to thermometric disturbances, though Professor Lloyd, its inventor, ascribes it to mechanical difficulties in its construction. He seems disposed, therefore, to abandon the instrument altogether; and he has already contrived another, called the Inclinator, for observing the same element. For the benefit of those who have not access to the "Proceedings of the Royal Irish Academy," I will transcribe the valuable remarks of this distinguished observer and expounder of Terrestrial Magnetism, in his own words;—

"In order to know all that relates to the earth's magnetic force, at a given place, observation must furnish the values of three elements. Those which naturally present themselves for immediate determination are, the *intensity* of the force itself, and the two angles (the *declination* and *inclination*) which determine its direction. We may substitute for these, however, any other system of elements which are connected with them by known relations. Thus, we have hitherto preferred to observe the *declination*, and the *two components* (horizontal and vertical) *of the intensity*; and, in general, the main considerations which should guide us in our choice are, the exactness of the observed results, and the facility of their determination.

"In this point of view, the *declination* and the *horizontal com-*

ponent of the intensity leave us nothing to desire, their determination being now reduced to a degree of precision, hardly (if at all) inferior to that of astronomical measurements. The same thing, however, cannot be said respecting the third element, as hitherto observed. In the Dublin Magnetical Observatory, and in the Observatories since established by order of the Government and of the East India Company upon the same plan, the third element chosen for observation has been the *vertical component of the intensity*, the instrument for the measurement of which has been already submitted to the notice of the Academy. The principle of this instrument, it will be remembered, is to balance the vertical component of the magnetic force by a fixed weight, and to observe the changes of the position of equilibrium, under the action of the changing force. Unexceptionable as this principle is in theory, the accuracy of the results has not been commensurate with that of the other two instruments. This inferiority is to be traced to the large influence which the unavoidable errors of workmanship must necessarily have on the position of equilibrium of a magnet supported on a fixed axle. It has been shown, that the effect of magnetizing a bar, under the most advantageous circumstances of form, and at the part of the globe where the vertical component of the magnetic force is greatest, is the same (as to its position of equilibrium) as if its centre of gravity had been transferred about the $\frac{1}{40}$ th of an inch towards the north end; so that the moment of the force, exerted by the vertical component of the earth's magnetism, can never exceed this small quantity multiplied by the weight of the bar. Now, in order to render the results of this instrument comparable to those of the Horizontal-Force Magnetometer, it should enable us to measure changes of the vertical force, amounting to the $\frac{4}{100,000}$ th

MAGNETIC OBSERVATIONS AT CAMBRIDGE, UNITED STATES.

Göttingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Göttingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
1841. Oct. 26.															
h. m.								h. m.							
1 58	-6.43	27.5	145.2	140.0	26.7			4 30	+5.40	59.6	143.2	164.2	62.6	30.012	52.3
2 0	6.00	29.1	144.2	141.0	27.3	30.024	33.0	5 0	6.01	60.0	143.0	165.0	63.0	30.008	52.7
2 5	6.07	30.6	143.9	142.7	28.2			5 30	6.01	60.3	142.0	165.3	63.8	30.010	51.0
2 30	5.04	32.5	144.1	147.0	32.9	30.055	35.8	6 0	6.22	61.0	141.8	165.6	65.0	29.997	52.0
3 0	2.22	37.5	142.5	150.1	44.0	29.929	34.0	6 30	6.43	62.0	145.0	166.5	66.0	30.003	51.5
3 30	0.19	41.5	145.0	151.7	44.1	29.927	60.2	7 0	7.13	63.0	145.0	165.5	66.8	30.013	53.0
4 0	+1.01	45.9	146.5	151.1	48.1	29.901	45.0	7 30	7.44	64.4	144.4	166.0	67.7	30.024	52.0
4 30			146.0	159.0	53.2	29.843	46.3	8 0	7.44	64.9	145.2	164.3	67.6	30.036	51.8
5 0			136.0	168.1	55.5	29.855	47.1	8 30	7.45	65.5	145.0	165.0	67.4	30.049	51.0
5 30			144.1	161.7	58.3	29.806	48.8	9 0	8.00	66.0	146.0	165.9	67.1	30.049	49.8
6 0	4.03	56.7	144.9	162.7	59.7	29.838	49.0	9 30	7.44	65.6	146.0	165.4	66.7	30.065	46.0
6 31	4.20	58.0	146.0	161.0	62.0	29.681	50.0	10 0	7.32	64.6	147.0	164.3	65.5	30.096	44.5
7 0	4.39	58.0	143.0	162.5	61.0	29.750	50.0	10 30	7.22	64.0	147.0	164.5	64.0	30.114	41.5
7 30	4.36	59.0	145.1	161.5	61.6	29.750	50.0	11 0	7.11	63.5	147.5	164.6	63.0	30.097	40.8
8 0	5.14	60.6	145.8	162.9	61.8	29.736	50.0	11 30	7.11	62.7	150.5	163.7	62.5	30.112	39.7
8 30	5.08	59.3	146.0	165.1	62.0	29.739	49.2	12 0	7.07	62.0	150.3	164.4	60.7	30.118	38.7
9 0	4.29	59.5	155.8	165.7	61.9	29.740	48.6	12 30	7.06	61.5	169.0	165.7	60.0	30.130	37.0
9 30	4.38	60.5	156.1	162.6	61.0	29.734	48.0	13 0	7.06	61.0	166.4	161.5	60.0	30.169	36.0
10 0	4.42	59.6	148.3	159.8	60.5	29.688	46.8	13 30	7.06	60.6	157.0	164.0	59.0	30.151	35.0
10 30	4.47	60.0	149.1	160.3	59.5	29.715	46.0	14 0	7.03	60.0	153.0	161.7	57.5	30.217	34.0
11 0	5.15	60.0	148.1	159.9	59.0	29.753	44.0	14 30	7.08	59.5	155.5	161.7	58.3	30.247	34.0
11 30	5.16	58.6	151.0	159.4	58.5	29.722	44.5	15 0	7.05	59.0	164.0	164.3	57.0	30.240	33.5
12 0	5.08	58.5	150.1	160.1	58.1	29.730	43.8	15 30	8.08	58.5	147.0	149.0	57.0	30.263	32.0
12 30	5.42	60.0	152.1	159.1	58.0	29.719	42.0	16 0	8.08	58.5	165.1	168.1	56.0	30.230	31.5
13 0	5.22	61.0	158.2	153.1	58.0	29.745	42.8	16 30	8.06	57.5	160.6	153.7	55.5	30.266	30.5
13 30	6.04	59.6	159.1	156.3	57.5	29.760	43.5	17 0	8.09	57.0	160.4	166.7	54.5	30.262	30.5
14 0	5.00	58.5	155.5	159.3	57.0	29.763	44.0	17 30	9.14	56.5	163.2	159.4	54.0	30.247	30.0
14 30	4.22	58.2	157.0	159.7	56.8	29.783	44.0	18 0	10.05	57.0	143.9	164.0	53.5	30.275	29.5
15 0	4.26	58.3	154.1	159.5	56.7	29.763	43.0	18 30	10.30	56.5	144.3	160.4	53.5	30.303	28.0
15 30	5.31	59.5	153.0	159.6	57.0	29.785	43.0	19 0	9.38	55.4	159.4	160.7	53.5	30.336	28.0
16 0	5.14	59.0	149.0	158.9	57.0	29.713	43.5	19 30	7.32	54.6	161.1	157.9	52.0	30.307	28.0
16 30	6.27	58.5	143.7	157.9	57.0	29.764	43.5	20 0	7.43	55.0	155.0	157.9	54.0	30.281	28.0
17 0	6.06	58.0	147.8	157.9	57.0	29.796	43.0	20 30	6.31	54.5	152.5	155.8	52.5	30.346	27.5
17 30	6.11	58.0	141.0	159.2	56.5	29.757	42.0	21 0	6.14	56.0	155.0	155.9	53.0	30.480	26.1
18 0	6.42	57.5	146.5	158.1	56.0	29.760	41.0	21 30	6.40	54.2	151.3	155.4	53.5	30.371	26.5
18 30	6.42	57.6	144.3	158.8	55.8	29.743	39.5	22 0	6.23	55.2	152.0	155.5	53.4	30.395	25.5
19 0	6.10	57.3	138.4	159.6	55.6	29.758	37.3	22 30	6.32	55.5	152.1	155.2	55.5	30.383	26.5
19 30	6.09	57.0	142.8	158.6	55.3	29.832	37.4	23 0	6.45	55.0	146.4	155.5	53.5	30.405	26.2
20 0	6.02	57.5	145.8	158.1	54.5	29.812	38.3	23 30	6.24	54.5	163.4	156.3	53.0	30.398	26.0
20 30	6.29	56.5	147.8	157.5	54.5	29.866	38.0	24 0	6.18	52.0	143.5	150.7	52.2	30.411	26.0
21 0	5.11	56.5	146.6	158.0	54.5	29.683	37.2	Oct. 28							
21 30	5.20	56.6	148.5	157.4	54.5	29.719	37.0	0 30	6.20	54.3	146.4	155.2	53.7	30.422	27.0
22 0	5.15	56.8	146.2	157.6	55.0	29.752	36.7	1 0	6.22	53.7	143.1	159.0	53.8	30.423	28.5
22 30	5.00	56.8	143.4	158.2	55.0	29.919	37.1	1 30	6.22	53.2	150.8	159.0	52.8	30.428	30.6
23 0	5.03	57.1	138.9	156.9	55.0	29.912	36.2	2 0	6.22	53.6	147.8	156.0	53.3	30.433	32.8
23 30	4.40	56.6	139.9	156.1	54.5	29.910	35.8	2 30	6.23	54.2	150.0	156.2	55.8	30.411	36.0
Oct. 27.								3 0	7.42	55.5	152.5	157.2	57.8	30.422	37.0
24 0	4.48	56.0	143.5	155.4	54.5	29.936	35.8	3 30	7.00	56.3	150.5	158.2	60.0	30.429	38.6
0 30	4.32	55.7	145.5	155.9	55.0	29.948	36.0	4 0	7.00	57.2	149.3	159.5	62.0	30.348	40.0
1 0	4.06	55.3	143.4	158.4	54.5	29.951	38.6	4 30	7.24	58.6	146.0	162.6	64.0	30.400	41.0
1 30	4.02	55.2	140.4	158.5	54.2	29.953	42.0	5 0	8.32	60.0	145.0	164.0	66.0	30.446	42.0
1 50	3.43	55.0	145.6	158.2	54.0			5 30	8.29	61.0	144.5	164.0	67.5	30.442	43.0
2 0	3.48	55.0	146.0	158.2	54.0	29.965	44.7	6 0	8.38	60.0	143.0	163.9	68.0	30.410	43.0
2 10	4.01	55.0	145.3	158.6	54.0			6 30	7.43	61.6	142.5	164.0	68.0	30.387	43.0
2 30	4.18	56.0	146.0	159.2	55.3	30.048	47.0	7 0	8.01	62.5	143.1	163.7	67.6	30.445	43.5
3 0	4.28	56.5	145.1	160.0	56.7	30.040	49.0	7 30	8.00	62.7	143.0	163.8	67.2	30.423	44.0
3 30	5.08	57.5	143.0	161.5	58.8	30.041	50.6	8 0	7.44	62.5	144.0	163.1	66.5	30.416	44.2
4 0	5.26	58.0	143.0	162.7	60.7	30.004	53.0	8 30	7.37	63.0	145.0	162.5	65.0	30.421	42.3
								9 0	10.26	62.0	147.0	160.8	64.0	30.445	42.0

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
9 30	+10.26	62.0	147.8	160.7	63.0	30.413	41.3	15 30	+9 33	60.5	149.2	159.0	59.5	30.144	44.0
10 0	10.11	61.0	148.8	161.5	61.5	30.397	40.0	16 0	9.28	60.5	150.0	158.5	59.5	30.143	44.5
10 30	9.48	61.0	147.1	160.9	60.5	30.414	37.8	16 30	9.32	60.5	150.5	158.1	59.5	30.146	47.0
11 0	10.08	62.0	148.0	159.2	60.6	30.474	35.7	17 0	10.43	61.0	149.2	158.0	60.0	30.106	48.0
11 30	10.06	59.4	149.1	159.3	59.4	30.432	34.7	17 30	10.43	61.0	144.0	152.0	60.0	30.110	47.5
12 0	10.01	58.5	151.6	157.2	58.5	30.430	33.0	18 0	10.43	60.5	145.0	158.0	60.0	30.107	49.0
12 30	10.45	57.5	153.0	157.2	57.5	30.428	31.7	18 30	10.40	60.0	145.0	158.0	60.0	30.139	49.0
13 0	10.48	57.0	152.5	156.4	56.5	30.419	31.0	19 0	10.35	60.0	150.0	158.1	60.0	30.124	49.0
13 30	10.01	56.1	152.5	155.3	56.0	30.499	30.8	19 30	10.42	60.0	150.7	157.8	60.0	30.107	48.0
14 0	10.17	56.5	153.0	154.4	55.8	30.369	30.3	20 0	10.38	60.5	150.0	157.5	60.0	30.107	48.0
14 30	10.12	56.6	152.9	154.1	55.4	30.418	30.2	20 30	10.47	60.5	151.0	156.6	60.0	30.145	48.0
15 0	10.05	56.6	151.9	153.7	55.1	30.487	29.6	21 0	10.49	60.5	153.2	158.0	60.0	30.102	48.0
15 30	10.06	55.3	151.2	153.9	54.5	30.382	29.0	21 30	10.48	61.0	152.6	158.4	60.6	30.120	48.5
16 0	10.48	55.5	151.2	154.2	54.4	30.274	28.2	22 0	10.08	61.7	153.0	158.0	61.0	30.129	48.2
16 30	9.22	55.0	150.6	153.8	54.0	30.307	28.0	22 30	10.08	62.0	152.0	159.0	61.7	30.034	48.0
17 0	9.26	54.0	151.1	154.4	53.3	30.296	27.9	23 0	10.08	62.5	148.2	159.1	62.0	30.094	48.0
17 30	10.45	53.5	151.1	154.0	53.0	30.475	27.0	23 30	10.37	63.0	150.6	159.9	63.0	30.133	47.6
18 0	10.34	53.5	150.5	153.2	52.5	30.366	26.0	Oct. 30.							
18 30	10.34	53.0	150.0	153.0	52.1	30.335	26.0	24 0	10.17	63.7	151.8	160.0	63.0	30.139	48.0
19 0	10.38	53.5	150.3	153.0	53.0	30.333	26.5	0 30	10.06	63.6	152.5	161.0	63.5	30.150	49.0
19 30	10.48	54.5	149.0	153.2	54.0	30.356	26.0	1 0	10.07	63.6	154.9	162.0	63.3	30.138	50.0
20 0	10.06	55.0	149.5	153.5	54.5	30.325	26.0	1 30	10.07	62.7	154.8	163.0	63.0	30.163	53.0
20 30	10.20	55.5	149.0	153.8	55.0	30.234	26.0	2 0	10.06	62.4	155.0	164.1	63.2		
21 0	10.15	55.5	149.2	154.0	55.2	30.221	27.2	2 30	10.06	62.4	155.0	164.1	63.1	30.161	55.2
21 30	10.14	55.9	150.0	154.0	55.6	30.323	28.0	3 0	10.06	62.4	155.0	164.5	63.4		
22 0	10.20	56.0	149.9	154.0	55.8	30.319	26.0	Nov. 1.							
22 30	10.20	56.0	150.5	154.2	56.0	30.327	28.0	0 30	7.05	56.0	152.6	158.8	55.4		
23 0	10.29	57.0	151.0	154.5	57.0	30.320	29.0	1 0	7.05	56.0	153.0	157.2	55.4		
23 30	10.33	57.0	151.0	155.0	57.0	30.315	30.5	1 30	7.05	56.8	152.8				
Oct. 29.								2 0	8.07	58.2	153.5				
24 0	11.44	57.5	152.0	155.8	58.0	30.343	32.0	2 30	8.19	58.5	153.5			30.115	60.0
0 30	11.44	58.0	152.0	156.1	58.0	30.323	34.5	3 0	8.32	59.0	153.4				
1 0	11.48	57.5	152.8	157.0	58.2	30.381	36.0	3 30	9.13	60.5	153.2	156.8	62.1	30.112	63.0
1 30	10.47	57.3	153.3	158.9	56.8	30.348	37.0	4 0	10.25	61.5	152.3	159.5	64.2	30.139	66.8
2 0	10.35	56.4	153.0	158.0	56.8			4 30	11.35	64.6	159.5	160.3	66.5	30.107	67.6
2 30	10.33	56.5	153.0	157.9	56.8	30.334	42.0	5 0	12.33	66.2	147.4	161.7	68.4	30.110	69.7
3 0	10.32	56.6	152.7	157.8	56.8			5 30	13.24	68.0	146.3	162.8	70.2	30.122	75.0
3 30	10.24	56.6	153.1	156.6	56.5	30.294	43.0	6 0	13.56	69.5	145.5	163.6	72.5	30.107	72.4
4 0	9.29	57.0	152.0	157.9	56.8	30.268	45.0	6 30	14.25	70.5	144.7	164.5	74.0	30.094	72.6
4 30	9.29	58.2	149.7	158.8	58.0	30.183	49.1	7 0	14.45	71.7	143.2	165.1	75.7	30.074	72.8
5 0	9.39	58.5	147.6	159.2	58.6	30.291		7 30	15.03	72.5	142.5	165.0	76.5	30.062	72.5
5 30	9.47	59.1	146.0	160.7	59.0	30.289		8 0	15.19	73.0	143.0	165.0	77.0	29.998	72.5
6 0	10.00	59.0	146.0	160.9	59.0	30.253	51.0	8 30	15.24	74.0	144.0	165.0	78.0	30.070	73.0
6 30	9.39	59.4	142.9	162.0	58.9	30.253	53.0	9 0	15.24	74.0	144.5	165.0	77.0	30.001	74.0
7 0	9.33	59.4	142.0	158.9	59.0	30.250	56.5	9 30	15.09	74.0	145.2	164.2	76.0	30.039	74.8
7 30	9.36	60.4	138.9	160.5	59.9	30.248	55.0	10 0	14.41	73.4	146.2	165.5	75.3	30.028	70.5
8 0	9.36	60.8	134.9	163.7	60.5	30.226	54.5	10 30	14.35	73.5	146.2	164.0	74.5	30.005	69.3
8 30	9.27	61.0	135.7	162.9	61.1	30.240	54.0	11 0	14.21	72.5	147.5	163.7	73.5	30.010	68.0
8 30	9.31	61.2	143.1	162.6	61.0	30.215	54.0	11 30	14.14	72.0	150.0	165.0	72.5	30.006	64.0
9 0	9.43	61.3	145.0	159.8	61.0	30.210	54.0	12 0	14.10	71.5	148.5	164.0	72.0	30.020	62.0
9 30	9.41	61.5	147.8	159.2	61.0	30.166	52.5	12 30	14.06	71.4	148.6	163.9	71.6	30.008	61.2
10 0	10.06	62.8	149.0	158.3	62.0	30.174	50.0	13 0	14.06	70.6	149.0	165.0	71.1	30.021	60.3
10 30	10.14	63.0	147.5	158.0	62.8	30.157	48.0	13 30	13.30	70.6	148.5	164.6	70.5	29.981	59.5
11 0	10.21	63.3	150.2	158.3	62.8	30.190	46.8	14 0	13.21	70.0	150.0	165.5	69.8	29.983	59.3
11 30	11.35	62.5	148.2	158.6	62.8	30.172	45.7	14 30	13.06	70.8	161.0	166.0	69.3	29.982	58.0
12 0	10.17	62.4	148.5	158.4	62.0	30.146	44.8	15 0	13.44	72.0	159.8	163.7	68.8	29.948	57.5
12 30	10.05	62.0	148.9	161.8	61.8	30.165	45.5	15 30	12.27	68.5	150.5	162.7	68.0	29.971	56.8
13 0	10.04	61.8	157.6	161.9	61.5	30.175	46.6	16 0	12.14	68.0	152.5	164.6	67.5	29.985	56.0
13 30	9.19	61.5	154.9	159.7	61.8	30.283	46.9	16 30	12.12	67.5	152.5	160.7	67.0	29.955	55.6
14 0	10.11	61.4	149.7	158.0	60.5	30.133	46.2	17 0	12.04	67.1	153.5	160.3	66.6	29.947	55.0
14 30	9.12	60.0	148.7	159.0	60.0	30.130	46.0	17 30	11.41	67.0	153.0	159.4	66.0	29.902	54.0
15 0	9.36	60.0	150.0	158.0	60.0	30.126	45.5		11.49	66.0	153.0	158.9	65.0	29.902	54.0
									11.13	66.0	152.2	160.1	64.8	29.921	54.1

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
18 0	+11.31	66.0	151.8	158.7	65.0	29.915	54.0	0 30	+9.26	61.5	155.0	155.2	60.0	29.733	42.0
18 30	11.37	65.0	150.7	158.7	63.8	29.915	54.0	1 0	9.16	60.5	155.0	155.8	59.4	29.727	44.5
19 0	12.07	64.0	152.7	159.1	63.8	29.908	54.0	1 30	9.21	60.0	156.0	155.6	59.2	29.709	48.6
19 30	12.39	64.0	150.0	157.0	63.8	29.899	54.0	2 0	9.26	59.8	155.6	156.1	59.5		
20 0	12.39	65.0	153.0	158.0	65.0	29.897	53.6	2 10	9.29	60.0	155.6	156.1	59.7	29.719	58.6
20 30	12.10	65.0	150.5	158.0	65.5	29.815	53.5	2 20	9.31	60.1	155.0	156.5	60.0		
21 0	11.47	65.0	152.0	157.5	65.0	29.818	53.5	2 27	10.39	60.1	154.9	157.0	60.6	29.706	48.0
21 30	12.29	65.0	158.0	158.0	64.5	29.821	53.0	2 57	10.40	59.9	154.0	158.1	60.9	29.706	50.8
22 0	12.29	64.0	157.0	158.0	64.5	29.811	53.0	3 27	10.48	62.0	157.1	159.1	62.6		54.0
22 30	12.29	64.0	157.0	158.0	64.5	29.821	52.0	3 57	10.11	62.5	158.6	160.0	65.0		56.0
23 0	11.31	65.0	152.2	158.0	64.8	29.847	52.0	4 30	10.26	63.0	147.1	161.2	66.0	29.693	57.8
23 30	11.20	64.0	152.2	158.0	64.5	29.798	53.5	4 57	11.41	64.0	145.4	161.5	67.5	29.693	59.8
Nov. 2.								5 30	11.33	65.0	144.0	163.0	69.0	29.663	61.5
24 0	11.01	67.5	154.0	157.7	64.0	29.847	54.0	6 0	12.05	66.0	143.3	162.3	70.3	29.651	61.9
0 30	11.07	64.0	155.0	157.5	63.6	29.858	56.0	6 30	12.26	67.1	143.0	163.6	71.3	29.632	61.4
1 0	10.31	63.5	155.4	158.5	63.5	29.830	57.1	7 0	13.00	68.0	143.6	163.9	72.0	29.632	60.0
1 30	10.33	63.3	155.5	159.0	63.2	29.801	60.3	7 30	13.00	68.4	142.2	163.8	72.0	29.612	59.0
2 0	10.35	63.5	154.9	159.0	64.0	29.789	63.5	8 0	13.00	68.4	144.6	163.0	71.9	29.590	56.5
2 10	10.40	63.7	154.8	159.2	63.9			8 30	13.37	68.4	145.0	162.0	71.0	29.591	56.5
2 30	10.43	64.0	153.5	159.6	63.9	29.787	63.4	9 0	13.13	68.4	146.7	160.9	70.0	29.714	55.0
3 0	11.15	64.6	152.3	159.8	64.4	29.784	66.9	9 30			147.5	159.5	69.0	29.422	53.0
3 30	11.29	65.0	150.5	159.8	65.1	29.768	67.4	10 0			148.0	159.5	68.0	29.427	50.0
4 0	12.09	66.2	149.2	160.3	66.1	29.637	70.0	10 30							
5 0			145.0	161.9	67.4	29.720	66.0	11 0	11.25	64.5	149.5	160.5	65.0	29.570	46.0
5 30	12.37	67.3	143.9	161.2	67.5	29.698	66.0	11 30	11.49	64.0	150.0	157.7	65.0	29.561	45.0
6 0	12.35	67.3	142.9	161.3	67.4	29.691	65.3	12 0	11.39	62.7	150.6	158.4	63.0	29.564	44.0
6 30	12.20	67.3	141.5	160.4	67.2	29.681	64.1	12 30	10.16	61.6	149.7	159.0	62.2	29.587	43.8
7 0	12.01	67.0	141.0	159.4	67.0	29.690	60.3	13 0	9.40	60.7	151.1	157.6	61.3	29.606	43.7
7 30	11.36	66.6	141.5	160.1	66.7	29.682	61.0	13 30	9.09	60.0	152.7	154.7	60.2	29.567	43.5
8 0	11.16	66.3	141.6	159.3	66.2	29.671	60.9	14 0	9.02	60.0	151.8	152.9	59.5	29.611	42.5
8 30	11.08	65.5	141.7	158.7	65.9	29.683	60.6	14 30	9.02	58.3	150.6	149.3	58.2	29.522	41.8
9 0	11.08	66.4	145.3	160.2	65.5	29.699	61.0	15 0	8.07	57.0	152.5	150.6	57.5	29.549	41.0
9 30	11.08	66.0	147.2	159.4	65.0	29.680	60.5	15 30	8.48	56.3	152.6	149.8	56.8	29.530	40.3
10 0	11.08	65.0	146.2	158.6	64.0	29.640	58.0	16 0	8.45	55.9	149.8	149.1	56.2	29.524	39.8
10 30	11.16	65.0	145.5	158.4	64.2	29.693	54.2	16 30	8.05	56.0	152.9	148.8	56.4	29.548	39.3
11 0	11.27	65.0	153.0	157.4	63.5	29.711	52.0	17 0	8.16	56.4	154.9	153.0	56.8	29.515	38.5
11 30	11.40	65.4	149.6	157.1	63.6	29.706	52.3	17 30	8.16	56.8	154.2	154.0	57.2	29.558	38.0
12 0	12.45	64.6	150.3	157.3	63.0	29.725	52.2	18 0	13.42	57.5	149.3	150.9	57.3	29.534	37.0
12 30	12.21	64.0	150.7	157.0	62.6	29.726	52.0	18 30	18.30	57.0	155.6	159.7	57.2	29.558	36.2
13 0	11.07	63.5	150.2	157.7	62.0	29.736	51.2	19 0	18.37	57.0	149.4	163.4	57.5	29.525	36.4
13 30	10.36	62.0	153.1	159.1	61.5	29.731	50.5	19 30	12.49	57.0	166.3	158.3	57.0	29.562	34.7
14 0	10.41	62.5	160.1	155.0	61.0	29.749	49.6	20 0	10.26	56.5	157.9	155.8	56.8	29.565	35.5
14 30	10.41	62.5	151.9	154.6	61.0	29.732	50.0	20 30	8.48	56.2	158.0	152.0	56.1	29.544	34.3
15 0	10.48	63.0	152.2	157.0	61.5	29.752	49.0	21 0	7.00	55.7	158.2	152.6	56.0	29.528	33.6
15 30	10.42	63.3	150.0	156.6	61.2	29.741	48.8	21 30	8.08	56.0	160.1	151.8	55.8	29.530	33.3
16 0	10.48	63.4	150.8	156.3	61.5	29.749	48.8	22 0	8.41	56.0	165.0	151.5	55.8	29.510	33.8
16 30	10.24	63.5	150.9	156.3	62.0	29.729	46.0	22 30	8.23	55.5	159.7	153.7	55.2	29.531	32.6
17 0	10.16	63.0	150.9	156.7	60.5	29.762	45.9	23 0	9.45	55.0	135.0	153.5	55.0	29.558	32.0
17 30	10.45	63.0	151.0	156.5	61.5	29.749	45.0	23 30	14.28	54.8	140.4	151.3	54.7	29.542	31.0
18 0	10.41	63.0	151.2	157.0	61.5	29.728		Nov. 4.							
18 30	10.41	62.5	152.2	156.5	61.0	29.730	43.0	24 0	12.31	54.4	144.1	152.9	54.2	29.565	32.0
19 0	10.34	62.0	152.9	157.0	61.0	29.719	43.0	0 30	11.21	54.6	153.9	154.3	54.2	29.577	33.2
19 30	10.21	61.5	150.5	157.0	60.5	29.702	42.5	1 0	9.00	54.6	159.1	157.7	54.5	29.603	57.2
20 0	10.20	61.5	152.0	156.8	60.5	29.717	41.5	1 30	8.47	54.1	154.7	154.0	53.4	29.668	37.5
20 30	10.21	61.0	152.9	156.7	60.0	29.742	41.5	2 0	7.01	54.2	149.4	159.0	53.3	29.623	38.0
21 0	10.22	61.5	153.0	156.1	60.0	29.746	41.0	2 30	8.37	54.1	151.9	160.7	53.8	29.607	40.0
21 30	10.22	61.0	152.5	155.5	60.0	29.743	41.0	3 0	8.25	54.1	148.0	152.3	53.4	29.614	42.1
22 0	10.26	61.0	152.1	155.0	60.5	29.745	39.4	3 30	7.15	54.0	141.1	163.4	53.2	29.735	43.0
22 30	10.21	61.0	152.2	155.2	60.5	29.749	39.0	4 0	7.35	54.1	141.2	159.8	53.3	29.712	43.5
23 0	10.16	61.0	151.3	155.0	60.6	29.753	38.5	4 30	7.36	54.3	142.9	157.0	53.8	29.689	59.5
23 30	10.15	60.5	151.9	154.9	60.5	29.749	39.0	5 0	7.13	55.5	143.1	158.5	54.7	29.679	47.0
Nov. 3.								5 30	8.25	56.5	143.5	157.5	56.0	29.734	50.0
24 0	9.38	60.5	153.9	155.1	60.5	29.753	42.0	6 0	8.57	58.0	142.0	167.9	57.5	29.577	50.5

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Att. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Att. Th.
h. m.								h. m.							
6 30	+9.40	59.0	143.0	158.0	59.0	29.639	51.0	12 30	+8.53	58.0	151.6	155.2	57.0	29.534	43.0
7 0	10.17	60.0	143.5	157.5	60.0	29.424	50.0	13 0	8.17	58.0	155.4	156.5	57.0	29.549	43.0
7 30	10 29	60.0	143.5	158.9	60.0	29.559	49.0	13 30	9 58	59.0	158.0	157.1	58.0	29.514	42.0
8 0	9.12	60.3	144.5	159.3	60.5	29.539	49.0	14 0	9.17	61.0	157.7	156.0	58.0	29.516	42.0
8 30	9.01	60.3	148.0	161.1	60.3	29.531	48.3	14 30	10.32	59.5	158.6	158.1	58.4	29.595	42.6
9 0	9.46	60.3	150.7	160.0	60.0	29.547	48.0	15 0	10.26	59.1	158.7	156.2	58.3	29.639	47.0
9 30	9.33	59.7	150.0	158.7	59.5	29.554	47.0	15 30	11.11	59.5	157.5	160.9	58.2	29.594	43.0
10 0	9.37	59.3	148.7	156.5	58.8	29.553	46.5	16 0	11.42	60.5	149.5	161.3	59.5	29.582	42.5
10 30	9 48	58.5	147.5	155.6	58.6	29.543	46.2	16 30	12.26	61.3	156.6	161.1	59.8	29.595	43.0
11 0	9.54	59.2	149.5	155.2	58.6	29.534	46.0	17 0	12.43	61.5	150.0	160.0	60.8	29.581	43.6
11 30	9.36	59.8	149.7	155.1	59.0	29.532	46.0	17 30	13.41	61.5	152.4	160.0	62.1	29.612	43.0
12 0	9.48	61.0	151.3	153.8	59.0	29.541	46.0	18 0	16.17	62.0	145.0	162.5	61.0	29.569	43.0
12 30	10.31	60.0	151.8	153.5	58.9	29.511	46.0	18 30	18.04	62.5	141.5	170.2	61.5	29.450	42.0
13 0	10.40	60.0	151.3	154.2	59.0	29.532	46.0	19 0	18.04	62.5	158.0	163.4	62.5	29.573	41.0
13 30	9.15	60.0	148.5	156.8	59.0	29.528	46.0	19 30	18.30	64.2	157.5	162.3	63.6	29.560	41.0
14 0	9.23	59.5	151.2	158.5	58.8	29.519	46.2	20 0	16.16	64.5	158.0	166.2	64.0	29.585	42.5
14 30	9.23	59.8	155.0	161.0	59.0	29.506	46.0	20 30	15.23	64.5	156.0	161.2	64.0	29.585	42.0
15 0	12.40	63.2	146.0	156.8	59.5	29.496	46.5	21 0	14.20	64.5	147.9	161.2	64.0	29.583	41.5
15 30	12.43	62.0	150.0	157.1	62.0	29.475	46.7	21 30	14.11	65.0	151.0	161.0	64.5	29.573	41.2
16 0	11.08	62.0	150.0	160.6	62.0	29.468	46.6	22 0	15.05	65.0	152.0	159.2	65.0	29.540	41.0
16 30	11.41	62.0	151.0	158.4	61.0	29.484	46.5	22 30	14.32	65.5	150.0	159.5	65.0	29.565	41.0
17 0	11.46	62.0	151.1	159.0	60.8	29.464	46.4	23 0	14.08	65.0	150.0	158.7	65.0	29.576	41.0
17 30	11.49	61.5	152.8	160.2	60.4	29.455	45.8	23 30	14.52	65.0	143.5	160.1	65.0	29.561	41.0
18 0	11.35	61.0	145.9	160.4	60.5	29.448	44.5	Nov. 6.							
18 30	11.42	61.0	145.5	159.6	60.0	29.426	43.7	24 0	14.36	65.5	124.0	166.5	65.0	29.585	40.5
19 0	12.49	60.5	154.1	160.5	60.0	29.418	42.0	0 30	12.45	65.0	129.8	164.3	64.9	29.621	40.5
19 30	12.09	61.0	153.8	163.2	59.9	29.421	41.6	1 0	12.40	65.0	134.5	163.5	63.8	29.628	40.5
20 0	13.04	64.0	146.0	161.0	60.5	29.357	42.0	1 30	11.39	61.7	140.2	162.6	62.7	29.631	41.8
20 30	13.22	63.7	141.8	159.8	60.7	29.364	42.0	1 50	10.43	62.0	141.9				
21 0	13.48	61.5	152.0	159.7	60.7	29.352	42.0	2 0	10.27	62.0	142.2	162.3	61.8	29.658	41.2
21 30	14.36	62.0	155.5	155.7	61.3	29.348	42.0	2 10	10.27	61.7	142.1	163.4	61.5		
22 0	14.33	62.5	141.0	164.7	62.0	29.356	42.2	Nov. 8.							
22 30	14.30	62.7	138.1	164.5	62.4	29.373	42.5	1 50	6.49	36.2	145.1	141.9	34.1		
23 0	14.31	66.5	149.1	154.5	62.9	29.313	43.0	2 0	6.04	36.4	143.7	140.1	34.6	30.046	31.0
23 30	14.27	63.3	152.3	154.7	63.0	29.317	44.5	2 10	6.04	36.6	144.7	144.4	34.8		
Nov. 5.								2 30	0.14	37.5	145.0	141.5	35.5	30.051	32.0
24 0	14.18	63.6	149.0	155.2	63.2	29.317	43.3	3 0	1.08	39.6	144.1	142.7	38.0	29.948	33.0
0 30	14.48	64.0	148.6	156.0	63.6	29.299	43.5	3 30	2.16	41.5	142.0	145.1	40.0	30.017	34.0
1 0			145.4	157.8	63.7	29.315	44.0	4 0	3.17	44.0	139.0	148.0	42.3	30.017	34.5
1 30	14.40	63.5	149.5	159.7	65.0	29.337	44.5	4 30	3.06	45.6	137.0	149.0	44.5	29.983	34.5
1 50	13.17	63.3	148.5	161.4	64.0			5 0	4.21	47.5	135.6	149.7	46.0	29.961	36.0
2 0	13.11	63.4	148.3	162.7	63.9	29.344	45.2	5 30	5.41	48.0	136.5	149.0	47.0	29.931	34.5
2 10	13.02	63.2	149.4					6 0	5.03	49.0	134.4	149.1	48.0	29.855	34.5
2 30	12.28	62.9	151.4	161.4	62.9	29.357	45.5	6 30	6.42	50.0	133.5	148.6	48.0	29.863	35.0
3 0	12.28	62.2	155.5	161.5	62.0	29.358	45.6	7 0	6.40	51.5	134.2	150.7	50.0	29.850	35.1
3 30	11.04	61.3	149.4	166.2	61.4	29.394	46.0	7 30	6.40	52.2	138.0	151.1	51.3	29.638	35.5
4 0	11.28	60.8	146.0	168.6	60.3	29.398		8 0	5.41	52.4	136.4	150.0	52.0	29.767	36.1
4 30	10.17	60.5	149.0	165.5	60.0	29.408	46.0	8 30	6.00	52.6	138.0	150.6	52.0	29.772	36.2
5 0	9.31	60.5	148.5	162.8	59.0	29.410	49.0	9 0	6.11	52.9	139.1	149.3	52.3	29.771	36.8
5 30	9.59	60.0	145.2	161.2	59.5	29.409	50.0	9 30	6.12	53.0	140.3	148.8	52.3	29.760	36.9
6 0	10.29	60.0	143.2	160.2	59.5	29.430	49.0	10 0	6.19	53.0	140.8	148.5	52.4	29.760	36.5
6 30	9.08	60.0	142.8	158.8	59.5	29.432	47.8	10 30	6.37	53.7	141.6	148.4	52.9	29.769	36.2
7 0	9.30	60.0	143.5	160.3	59.2	29.319	46.7	11 0	7.48	54.0	142.0	150.2	53.5	29.770	34.0
7 30	9.28	60.0	142.7	161.7	59.0	29.320	56.0	11 30	7.08	54.7	143.3	151.1	53.9	29.804	33.8
8 0	7.46	59.1	143.1	164.0	58.6	29.480	45.0	12 0	6.39	53.5	143.2	152.1	54.4	29.801	33.1
8 30	7.12	58.0	141.9	164.1	57.7	29.479	45.8	12 30	7.01	54.0	148.7	152.4	52.8	29.793	33.1
9 0	6.14	58.0	141.2	165.5	57.2	29.500	45.3	13 0	7.01	54.0	144.0	153.7	53.0	29.805	32.7
9 30	5.52	63.5	149.0	165.1	61.5	29.463	44.6	13 30	6.42	54.2	144.0	151.1	53.0	29.815	32.8
10 0	4.25	62.0	148.2	166.5	61.0	29.436	44.0	14 0	7.00	54.3	144.0	154.6	53.2	29.846	32.5
10 30			146.2	163.0	55.4	29.522	44.0	14 30	7.40	54.5	146.1	152.0	53.4	29.845	33.2
11 0	1.29	57.0	160.0	162.2	54.5	29.516	45.0	15 0	7.38	54.6	146.4	150.9	53.8	29.865	32.5
11 30	6.07	57.5	147.5	153.7	56.0	29.540	43.5	15 30	7.43	54.8	145.0	151.3	54.0	29.886	33.5
12 0	6.48	57.7	154.0	157.0	56.9	29.545	43.0	16 0	7.43	54.6	142.9	152.0	54.0	29.917	34.8

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
16 30	+7.31	54.5	143.5	152.0	54.0	29.927	34.0	23 0	+9.07	58.5	143.5	151.7	53.8	30.578	33.0
17 0	7.31	54.1	143.1	151.4	53.8	29.949	34.0	23 30	10.30	60.5	143.0	152.8	60.0	30.406	33.0
17 30	8.09	54.0	147.6	152.9	53.5	29.943	33.5	Nov. 10.							
18 0	8.26	54.5	142.9	148.6	53.8	29.938	33.0	24 0	9.41	60.0	142.5	154.9	59.5	30.453	32.5
18 30	8.30	55.0	144.0	146.8	54.5	29.984	33.5	0 30	9.17	58.6	141.6	154.3	59.2	30.473	32.0
19 0	9.08	55.8	142.5	150.6	55.3	29.996	33.2	1 0	8.40	57.5	140.2	153.9	57.0	30.478	33.0
19 30	9.03	56.0	143.8	152.1	55.5	30.005	34.0	1 30	8.14	55.8	144.3	156.7	56.2	30.483	34.3
20 0	8.39	56.0	143.1	152.3	55.5	30.012	34.0	1 50	8.00	55.3	147.1	154.5			
20 30	8.39	55.8	148.0	153.7	55.8	30.044	34.6	2 0	8.00	55.2	147.7	154.3	55.6	30.487	34.9
21 0	8.29	56.1	144.5	153.8	56.0	30.049	34.8	2 10	8.00	55.3	147.5	154.7	55.2		
21 30	8.30	56.3	142.2	153.1	56.1	30.103	34.9	2 30	8.14	55.0	145.6	154.2	55.0	30.495	34.5
22 0	8.39	56.2	143.2	154.0	56.0	30.073	35.0	3 0	7.24	55.0	144.2	153.5	54.0	30.451	34.5
22 30	8.43	56.5	146.8	154.8	56.5	30.115	35.3	3 30	8.20	55.5	143.0	153.2	55.0	30.500	34.5
23 0	8.47	57.1	141.1	155.2	57.0	30.138	35.5	4 0	8.25	56.5	141.4	153.1	55.0	30.490	34.7
23 30	9.18	58.4	140.0	153.9	58.3	30.125	35.5	4 30	8.29	55.7	139.8	153.6	55.0	30.496	34.6
Nov. 9.								5 0	8.22	55.7	138.9	154.5	55.0	30.492	34.7
24 0	10.10	59.7	144.8	152.2	59.5	30.149	35.7	5 30	8.09	55.3	138.0	153.8	54.7	30.465	35.3
0 30	10.27	60.5	146.1	151.9	60.0	30.239	35.5	6 0	8.33	54.8	137.3	153.4	54.3	30.468	35.0
1 0	10.09	60.0	147.6	153.6	60.0	30.240	35.5	6 30	7.16	54.3	137.3	152.8	53.7	30.400	35.0
1 30	10.31	58.0	147.6	154.0	58.0	30.307	34.0	7 0	7.10	54.0	138.3	151.5	53.5	30.455	35.0
2 0	9.16	58.0	148.0	154.7	58.0	30.248	34.5	7 30	7.18	54.2	139.0	152.0	54.0	30.431	36.0
2 10	9.07	58.0	147.0	156.5	58.0			8 0	8.37	55.0	139.7	150.6	54.5	30.422	34.5
2 30	9.48	58.0	147.0	158.5	57.0	30.265	37.5	8 30	8.46	56.0	137.9	150.7	55.5	30.423	34.4
3 0	9.36	56.8	144.0	158.9	56.5	30.278	37.5	9 0	8.57	56.5	138.5	150.1	56.2	30.429	34.7
3 30	9.01	56.9	144.9	158.9	56.5	30.295	38.4	9 30	8.13	56.5	139.7	152.0	56.2	30.425	32.9
4 0	9.01	57.0	142.5	156.5	56.8	30.252	39.0	10 0	8.54	56.2	139.2	151.1	56.0	30.430	31.3
4 30	9.01	57.5		155.9	57.0	30.249	39.5	10 30	8.45	55.6	141.9	150.6	55.8	30.431	29.5
5 0	9.04	57.2	137.2	157.2	57.5	30.308	40.0	11 0	8.45	55.5	140.9	150.2	55.2	30.431	28.6
5 30	9.25	58.5	135.9	157.4	58.0	30.308	40.1	11 30	7.04	55.3	140.0	149.8	54.8	30.424	28.3
6 0	9.42	58.5	134.7	157.9	59.0	30.310	42.0	12 0			140.0	150.0	54.9	30.403	28.0
6 30	9.42	59.5	135.0	156.0	60.0	30.299	42.0	12 30	6.31	54.5	139.9	152.2	53.5	30.419	27.5
7 0	9.42	60.5	134.5	157.0	60.0	30.299	42.0	13 0	6.23	53.7	142.9	153.5	52.8	30.425	27.2
7 30	9.32	60.7	134.3	157.2	60.5	30.292	42.8	13 30	6.23	53.5	143.9	151.6	52.2	30.422	26.5
8 0	9.24	60.6	134.0	157.8	60.6	30.307	43.5	14 0	6.34	53.6	144.1	149.0	52.5	30.419	26.0
8 30	9.20	60.0	133.5	156.9	59.8	30.319	40.8	14 30	6.20	54.1	139.8	151.2	53.0	30.414	25.6
9 0	9.00	59.0	137.0	154.7	59.0	30.347	39.5	15 0	6.39	54.5	142.0	150.1	53.2	30.419	25.1
9 30	7.32	58.2	136.0	153.8	58.0	30.360	38.0	15 30	7.05	55.0	144.0	150.2	53.6	30.395	25.1
10 0	7.40	57.5	134.3	154.9	57.0	30.352	38.0	16 0	7.41	55.8	144.2	150.5	54.8	30.376	25.1
10 30	7.36	56.1	140.5	153.8	56.0	30.371	37.5	16 30	7.44	56.2	142.0	150.0	55.1	30.380	24.9
11 0	8.00	56.0	142.1	151.1	55.3	30.335	36.2	17 0	7.48	56.3	140.0	150.8	55.2	30.372	24.8
11 30	7.35	55.5	143.4	150.3	55.0	30.365	34.0	17 30	8.02	55.8	142.0	152.0	55.0	30.381	24.7
12 0	7.14	54.7	142.4	152.1	54.7	30.348	32.0	18 0	7.23	55.2	142.0	151.8	54.3	30.389	24.2
12 30	7.51	54.3	144.0	152.1	53.8	30.370	32.5	18 30	7.27	54.5	139.6	151.6	53.8	30.379	24.0
13 0	6.43	54.0	145.2	152.2	53.4	30.368	32.5	19 0	7.33	54.2	143.0	151.4	53.0	30.372	23.8
13 30	6.43	54.7	145.1	150.9	53.2	30.363	31.5	19 30	7.33	54.0	143.0	150.5	53.2	30.367	23.6
14 0	6.38	54.0	145.5	150.9	53.1	30.347	30.7	20 0	7.44	54.7	144.8	150.6	53.5	30.356	23.6
14 30	6.34	53.7	145.8	151.8	53.0	30.336	29.8	20 30	8.07	55.0	145.5	151.6	53.8	30.357	23.5
15 0	6.23	53.5	148.4	153.1	52.8	30.367	29.8	21 0	8.13	55.0	145.5	151.0	54.0	30.345	22.7
15 30	6.18	53.3	144.2	151.6	52.6	30.367	29.8	21 30	8.07	54.7	146.8	149.8	53.9	30.339	22.7
16 0	6.23	53.5	143.7	151.4	52.5	30.361	29.6	22 0	8.00	55.2	145.9	150.2	53.9	30.341	22.9
16 30	6.16	53.4	144.0	150.0	52.4	30.365	30.2	22 30	8.02	55.3	144.8	149.8	53.9	30.367	22.8
17 0	6.21	53.5	142.6	150.7	52.0	30.381	31.5	23 0	8.00	55.3	145.7	149.3	53.6	30.310	22.3
17 30	6.26	53.0	142.5	149.1	52.3	30.451	32.5	23 30	7.44	55.0	145.8	148.5	53.4	30.291	22.3
18 0	6.42	53.7	142.1	148.7	53.0	30.453	33.0	Nov. 11.							
18 30	7.13	54.5	143.1	149.8	53.5	30.451	33.5	24 0	7.38	54.5	146.8	149.9	52.7	30.282	22.1
19 0	7.26	55.0	142.0	149.8	53.8	30.468	32.2	1 30	6.37	52.0	146.4	150.7	51.0	30.272	24.8
19 30	7.33	55.0	141.7	149.5	54.0	30.485	32.2	1 50	6.37	51.7	147.8	150.5	51.7		
20 0	7.31	55.5	142.7	150.1	54.2	30.496	32.5	2 0	6.37		145.5	150.5	51.8	30.169	28.0
20 30	8.17	56.0	142.2	149.5	55.0	30.455	32.5	2 10	6.33	51.7	145.1	152.0	52.2		
21 0	8.28	56.6	143.0	150.5	55.3	30.448	32.5	2 30	7.11	51.6	143.4	156.5	54.6	30.255	30.5
21 30	8.40	57.3	142.7	150.1	56.0	30.448	32.5	3 0	7.28	52.0	143.4	156.2	59.0	30.259	33.2
22 0	9.08	56.8	143.0	149.7	57.0	30.517	32.2	3 30	8.00	53.0	140.9	159.0	65.0	30.242	36.5
22 30	8.44	57.5	144.0	150.8	58.0	30.446	33.0	4 0	8.02	54.0	141.1	159.0	66.5	30.224	39.0

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
4 30	+8.46	56.0	138.4	159.7	65.5	30.194	41.0	11 0	+8.40	55.8	138.9	157.4	55.0	29.339	36.0
5 0	9.34	57.5	137.5	162.2	68.0	30.164	42.5	12 30	7.32	55.7	142.5	151.0	55.0	29.337	34.0
5 30	10.13	60.0	155.5	167.1	69.0	30.127	43.5	13 0	7.32	55.3	142.5	151.6	54.5	29.307	33.2
6 0	10.28	60.5	130.0	170.1	71.0	30.117	45.0	13 30	7.41	55.2	144.8	150.5	54.5	29.316	33.2
6 30	11.03	61.5	136.5	166.0	70.2	30.033	45.0	14 0	8.00	55.5	144.0	150.2	54.5	29.307	32.9
7 0	10.45	62.0	136.0	163.0	69.0	30.009	46.3	14 30	8.13	56.0	143.7	150.1	54.6	29.298	33.0
7 30	11.18	63.2	137.7	162.0	68.2	30.059	47.6	15 0	8.19	55.9	143.5	150.2	54.7	29.293	33.2
8 0	11.18	63.2	158.2	160.0	68.4	30.052	47.3	15 30	8.17	55.5	143.1	151.0	54.5	29.278	33.1
8 30	11.19	63.5	158.9	159.3	67.4	30.079	47.2	16 0	8.00	55.5	143.0	150.5	54.2	29.275	34.0
9 0	11.10	63.5	158.4	159.7	66.5	30.034	46.5	16 30	8.16	55.8	143.1	150.9	54.8	29.277	34.0
9 30	11.40	63.2	158.9	159.1	65.6	30.055	45.0	17 0	8.31	56.6	143.3	151.1	55.5	29.276	34.2
10 0	10.20	62.3	160.1	161.0	64.5	30.007	44.6	17 30	9.02	57.3	143.8	152.1	56.2	29.266	35.0
10 30	8.23	60.5	144.0	159.1	60.5	30.013	40.5	18 0	9.36	58.4	143.3	152.7	57.5	29.260	35.0
11 0	9.20	59.6	142.5	158.2	61.2	30.004	39.8	18 30	9.43	58.5	143.8	152.9	58.1	29.259	36.2
11 30	9.27	59.2	142.9	157.3	60.2	29.996	37.0	19 0	10.01	59.2	140.8	154.7	58.5	29.256	36.2
12 0	9.20	58.5	144.0	155.3	59.2	29.981	36.3	19 30	10.00	58.2	141.8	153.8	58.5	29.255	36.8
12 30	9.59	59.0	145.3	153.7	57.3	29.951	34.8	20 0	9.34	59.0	142.8	153.4	58.3	29.247	36.5
13 0	9.56	58.0	146.3	154.1	57.0	30.135	34.5	20 30	9.20	58.6	143.0	153.1	58.2	29.249	36.8
13 30	9.47	58.0	145.7	153.4	57.2	30.055	34.4	21 0	9.20	58.5	144.7	153.3	58.0	29.240	36.8
14 0	8.29	57.5	146.0	153.7	57.0	30.133	34.2	21 30	9.32	58.9	144.0	152.8	58.5	29.242	36.8
14 30	8.26	57.5	146.8	154.1	56.6	29.854	34.2	22 0	9.41	59.2	144.4	152.5	58.5	29.241	36.8
15 0	8.15	57.2	146.1	153.7	56.6	29.827	33.6	22 30	9.37	59.2	143.6	152.6	58.5	29.243	37.0
15 30	8.20	56.5	145.0	152.8	56.5	29.886	31.6	23 0	9.45	59.4	145.0	152.0	58.3	29.249	36.5
16 0	8.33	56.5	143.3	147.2	56.8	29.885	30.6	23 30	10.05	59.6	144.4	152.5	58.5	29.254	37.0
16 30	8.31	56.6	143.2	153.4	56.8	29.871	30.5	Nov. 13.							
17 0	8.31	56.3	143.7	154.4	56.2	29.872	30.2	24 0	10.00	59.6	146.0	152.2	58.6	29.259	36.0
17 30	8.19	56.0	143.0	154.4	55.8	29.858	30.2	0 30	10.02	59.2	146.6	152.8	58.2	29.272	35.5
18 0	8.14	55.5	144.3	154.2	55.3	29.857	30.1	1 0	9.15	58.5	144.7	156.7	57.2	29.282	36.0
18 30	8.09	55.0	139.4	153.5	54.9	29.845	29.7	1 30	8.36	57.6	147.0	156.5	57.0	29.281	37.0
19 0	8.24	55.0	128.0	153.5	54.5	29.773	29.0	1 50	8.27	56.7	147.1	156.0	56.6		
19 30	9.14	54.5	136.0	153.3	54.2	29.818	30.0	2 0	8.27	56.7	147.0	155.1	56.6	29.289	38.0
20 0	9.14	54.8	141.7	152.4	54.0	29.745	30.0	2 10	8.25	56.3	148.1	154.8	56.6		
20 30	9.06	55.0	143.8	152.9	54.5	29.747	29.6	Nov. 15.							
21 0	9.08	55.0	146.7	151.7	54.5	29.791	30.2	2 0	2.62	43.1	144.9	143.8	42.0	29.255	38.9
21 30	9.05	55.5	146.8	151.2	55.0	29.779	30.3	2 30	3.35	44.0	144.7	143.6	42.5	29.245	39.9
22 0	9.15	56.2	147.4	151.5	55.8	29.777	30.7	3 5	4.33	46.0	142.8	144.1	44.9	29.244	39.2
22 30	9.15	56.5	141.1	153.1	56.0	29.701	31.0	3 30	5.20	48.1	141.3	145.1	47.3	29.236	41.6
23 0	9.19	57.0	140.2	153.6	57.0	29.749	31.0	4 0	6.15	49.9	140.2	146.1	51.0	29.225	42.2
23 30	10.49	57.5	141.7	153.5	57.5	29.652	31.0	4 30	7.00	51.5	139.0	148.9	54.0	29.222	43.0
Nov. 12.								5 0	7.28	53.0	138.1	151.0	57.0	29.216	45.0
24 0	9.20	57.5	143.5	151.8	57.5	29.707	32.0	5 30	8.15	54.5	137.7	152.0	59.0	29.162	45.0
0 30	9.20	57.0	141.2	152.3	57.0	29.743	32.0	6 0	8.28	55.5	137.3	152.2	59.0	29.162	44.8
1 0	9.03	56.5	145.4	152.9	56.3	29.709	33.0	6 30	8.33	56.0	138.1	147.2	58.5	29.200	45.5
1 30	8.32	56.0	146.3	155.7	56.0	29.700	34.8	7 0	8.25	56.0	139.2	131.8	57.9	29.182	44.8
1 50	8.32	57.0	147.0	153.6	56.0			7 30	8.33	56.2	140.5	150.9	57.5	29.176	44.1
2 0	8.32	57.0	147.7	154.2	56.0	29.669	36.0	8 0	8.44	57.7	146.3	150.4	57.7	29.172	44.5
2 10	8.31	56.0	145.0	154.2	55.9			8 30	9.22	57.6	141.8	150.5	58.4	29.170	43.8
2 30	8.40	56.0	146.5	154.3	56.0	29.518	37.0	9 0	9.36	58.4	142.0	150.6	58.9	29.188	42.4
3 0	8.47	56.6	148.0	155.0	56.5	29.642	39.0	9 30	9.36	58.5	141.5	151.4	59.0	29.186	41.6
3 30	9.13	57.4	145.1	156.5	57.2	29.632	39.2	10 0	9.36	59.0	142.1	151.7	59.0	29.175	41.8
4 0	9.15	57.8	141.2	158.4	57.8	29.597	38.7	10 30	9.27	58.2	141.6	152.1	59.0	29.185	39.8
4 30	9.16	57.9	143.9	158.3	58.0	29.534	38.5	11 0	9.27	58.0	141.6	153.5	58.3	29.201	38.8
5 0	9.11	57.3	142.1	156.1	57.5	29.556	37.5	11 30	9.27	58.0	142.3	153.0	58.1	29.193	38.0
5 30	9.09	57.3	141.2	155.5	57.2	29.529	36.5	12 0	9.27	57.5	141.5	152.5	57.8	29.185	38.6
6 0	9.19	57.7	140.1	154.8	57.0	29.514	35.7	12 30	9.14	57.5	141.2	152.7	57.5	29.189	38.0
6 30	9.18	58.0	139.0	155.5	57.5	29.545	36.3	13 0	9.23	57.5	145.0	154.1	57.0	29.193	38.0
7 0	9.18	58.5	138.0	156.2	58.0	29.463	35.0	13 30	9.17	57.7	149.9	156.9	57.0	29.197	38.5
7 30	9.24	58.5	139.5	155.7	58.0	29.430	35.5	14 0	9.48	57.3	145.5	154.8	56.9	29.212	38.0
8 30	8.32	58.0	140.0	156.0	57.0	29.456	37.0	14 30	9.02	57.5	142.1	154.0	56.6	29.161	37.7
9 0	9.33	57.5	139.5	155.0	57.0	29.326	38.0	15 0	9.05	57.2	141.0	153.2	56.4	29.205	37.9
9 30	8.13	57.0	138.3	154.5	56.5	29.328	36.8	15 30	9.13	56.8	144.3	148.1	56.3	29.205	37.3
10 0	8.39	56.5	139.0	155.0	56.0	29.324	36.0	16 0	9.12	56.7	140.1	151.9	56.0	29.207	36.6
10 30	8.40	56.0	140.0	155.0	55.3	29.364	37.0	16 30	9.03	56.5	145.7	153.5	55.5	29.202	36.0

Gottingen Mean Time.		V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.									Nov. 17.							
17 0	+9.07	56.5	142.0	152.6	55.4	29.208	36.3	h. m.	24 0	+8.42	56.0	140.0	150.5	55.0	29.422	35.0
17 30	9.07	56.5	140.2	152.0	56.0	29.209	36.0	0 30	8.45	56.5	144.0	149.0	54.7	29.535	34.0	
18 0	9.00	57.0	141.2	151.6	56.8	29.224	36.4	1 0	8.30	55.2	144.6	151.2	53.8	29.531	34.2	
18 30	9.16	57.7	141.0	151.6	56.9	29.227	35.0	1 30	8.23	54.0	148.2	149.8	52.8	29.544	35.2	
19 0	9.16	57.5	141.0	151.7	56.8	29.224	34.3	1 50	8.23	53.5	149.0	150.3	52.0			
19 30	9.26	57.8	141.0	151.8	56.9	29.263	34.8	2 0	8.24	53.5	148.2	150.2	52.0	29.543	37.0	
20 0	9.38	58.3	141.2	151.6	57.3	29.238	33.8	2 10	8.25	53.5	146.2	150.9	52.0			
20 30	10.02	58.8	141.2	151.8	57.8	29.232	33.1	2 30	8.25	53.8	147.1	150.0	52.0	29.400	38.0	
21 0	10.09	59.0	141.8	151.9	58.5	29.251	33.0	3 0	8.25	54.0	145.5	149.8	52.0	29.544	40.9	
21 30	10.10	59.5	142.2	152.0	58.2	29.275	34.0	3 30	8.42	54.3	143.9	149.8	52.5	29.535	41.0	
22 0	9.45	58.5	143.0	152.0	57.8	29.262	34.0	4 0	9.00	54.5	142.5	150.0	53.0	29.531	40.1	
22 30	9.31	58.5	143.0	152.0	57.5	29.258	34.0	4 30	8.48	54.5	141.0	151.0	54.0	29.531	39.8	
23 0	9.28	58.3	142.0	152.0	57.3	29.231	33.0	5 0	8.43	54.6	139.9	152.0	54.0	29.525	38.0	
23 30	9.34	58.3	142.3	151.5	57.3	29.256	32.8	5 30	8.39	54.5	139.5	151.0	53.0	29.512	37.6	
Nov. 16								6 0	8.44	55.2	137.0	148.8	53.6	29.507	35.8	
24 0	9.48	59.0	142.9	152.0	58.0	29.304	33.0	6 30	9.09	55.8	137.8	150.9	54.5	29.506	35.0	
0 30	10.03	59.0	143.5	152.0	58.0	29.289	32.0	7 0	9.18	56.5	138.0	151.0	55.2	29.513	35.6	
1 30	9.47	59.0	144.9	153.9	57.0	29.241	31.6	7 30	9.18	57.0	137.8	149.9	56.0	29.513	36.7	
2 0	9.27	58.0	144.8	155.2	56.7	29.268	32.0	8 0	9.19	57.0	138.0	148.5	56.0	29.414	36.0	
2 30	9.15	57.2	145.8	154.9	55.6	29.313	33.0	8 30	9.12	57.3	137.7	149.1	56.2	29.435	36.3	
3 0	9.13	56.5	144.4	155.3	54.8	29.310	34.0	9 0	9.11	57.0	138.5	148.3	55.8	29.427	36.8	
3 30	8.44	56.0	142.8	154.0	54.5	29.318	34.2	9 30	8.46	56.4	139.8	147.8	55.0	29.502	35.7	
4 0	8.39	55.6	140.8	153.0	54.2	29.299	35.0	10 0	8.08	55.5	137.0	149.3	55.0	29.475	35.0	
4 30	8.23	55.5	139.9	152.0	54.7	29.215	36.0	10 30	8.03	54.5	143.0	152.0	53.0	29.470	34.5	
5 0	8.23	56.0	139.0	151.0	55.0	29.333	34.7	11 0	7.32	54.0	140.5	149.0	53.0	29.467	35.0	
5 30	8.09	54.8	138.1	150.0	54.2	29.316	34.5	11 30	7.32	54.0	139.0	146.3	52.8	29.562	35.0	
6 0	7.40	54.6	137.4	148.9	53.6	29.309	34.8	12 0	7.43	54.4	140.3	146.2	53.6	29.572	34.5	
6 30	7.38	54.5	137.9	148.0	54.7	29.320	36.0	12 30	8.46	54.5	141.9	146.6	53.8	29.584	34.0	
7 0	7.30	54.5	139.1	147.3	54.7	29.300	35.5	13 0	8.56	55.2	142.0	146.8	54.0	29.585	33.6	
7 30	7.20	54.0	140.6	147.4	54.1	29.305	35.0	13 30	8.34	55.5	143.2	147.2	55.8	29.612	33.2	
8 0	7.10	53.5	140.9	148.2	54.2	29.318	35.0	14 0	8.34	55.4	147.3	147.2	55.6	29.431	32.9	
8 30	7.01	52.5	141.9	148.6	51.6	29.331	34.8	14 30	8.17	55.2	139.6	146.6	54.0	29.610	32.0	
9 0	6.38	52.0	142.0	147.3	50.9	29.320	34.5	15 0	8.43	55.0	141.0	147.3	53.6	29.617	31.5	
9 30	6.35	56.7	142.1	147.4	51.0	29.326	34.5	15 30	8.43	54.2	141.2	148.0	53.0	29.639	31.5	
10 0	6.29	51.5	142.7	146.1	51.0	29.359	32.4	16 0	8.34	53.6	141.6	147.3	52.5	29.622	30.6	
10 30	6.33	51.5	141.5	146.3	51.0	29.403	31.5	16 30	7.35	53.5	141.8	145.4	53.0	29.615	28.0	
11 0	6.33	52.5	142.0	146.0	51.5	29.351	31.0	17 0	7.27	53.0	140.6	150.0	52.5	29.595	27.5	
11 30	7.48	53.0	142.0	146.4	52.0	29.351	30.0	17 30	7.27	53.2	141.5	148.3	52.5	29.650	27.0	
12 0	7.11	53.5	142.0	147.0	52.5	29.335	30.0	18 0	7.14	52.5	141.1	149.0	52.0	29.538	26.0	
12 30	7.35	53.5	142.5	147.0	52.0	29.417	30.0	18 30	7.15	52.5	142.0	148.0	52.0	29.660	25.5	
13 0	7.37	53.5	143.0	147.0	52.0	29.417	30.0	19 0	7.15	53.5	142.0	148.1	51.5	29.657	26.0	
13 30	7.43	53.6	142.5	147.2	53.0	29.424	30.0	19 30	7.15	53.5	142.0	147.8	51.5	29.689	25.5	
14 0	7.42	54.0	142.1	147.7	53.2	29.401	30.0	20 0	7.15	52.5	143.0	148.5	51.5	29.675	25.0	
14 30	8.07	54.5	142.1	148.0	53.7	29.413	29.8	20 30	7.13	52.5	143.0	148.2	51.0	29.674	25.0	
15 0	8.07	54.5	142.4	148.4	53.2	29.429	30.2	21 0	7.18	51.2	142.8	148.0	51.0	29.679	25.0	
15 30	8.07	54.0	142.0	148.0	54.0	29.432	30.5	21 30	7.33	52.7	142.3	147.1	51.5	29.702	24.8	
16 0	8.09	54.0	142.5	149.0	53.0	29.432	31.0	22 0	7.41	53.0	143.1	148.0	51.4	29.661	24.8	
16 30	8.12	54.0	144.5	148.0	54.0	29.411	34.0	22 30	7.45	53.3	143.1	148.0	52.0	29.608	24.2	
17 0	8.20	55.5	141.5	149.5	54.0	29.409	32.0	23 0	9.05	54.0	144.1	148.3	52.5	29.663	24.1	
17 30	8.41	55.0	142.0	150.0	55.0	29.429	31.0	23 30	9.23	54.5	143.5	148.9	53.3	29.684	24.2	
18 0	8.30	55.0	142.0	150.0	54.0	29.462	31.0	Nov. 18.								
18 30	8.43	55.0	141.5	149.5	55.0	29.426	31.0	24 0	9.27	54.5	144.2	149.0	53.5	29.690	24.7	
19 0	9.05	56.0	141.0	149.0	55.0	29.434	31.0	0 30	9.29	56.0	143.3	144.5	54.0	29.686	24.0	
19 30	9.20	56.5	140.5	148.5	55.3	29.442	31.0	1 0	8.21	54.6	144.2	149.0	53.8	29.693	24.8	
20 0	9.27	57.0	141.5	148.5	55.5	29.444	31.0	1 30	8.31	54.2	146.2	149.4	53.2	29.695	26.0	
20 30	9.00	56.5	142.6	147.5	55.0	29.422	30.0	1 50	8.04	53.5	147.1	150.1	52.6			
21 0	56.0	143.0	147.5	55.0	29.437	30.5	2 0	8.01	53.5	148.2	150.7	52.6	29.710	28.0		
21 30	8.32	55.0	143.0	147.5	54.5	29.442	30.5	2 10	8.02	53.4	148.1	150.9	52.6			
22 0	8.32	55.0	143.5	148.0	54.0	29.424	30.0	2 30	7.49	53.2	147.0	149.8	53.2	29.705	30.0	
22 30	8.32	55.0	142.5	147.5	54.0	29.448	34.0	3 0	8.26	54.0	145.6	149.3	55.0	29.700	31.8	
23 0	8.45	55.0	144.5	148.0	54.0	29.419	34.0	3 30	9.12	55.8	145.0	150.0	57.0	29.701	32.0	
23 30	9.30	55.0	142.0	148.5	54.0	29.413	34.0	4 0	9.39	57.0	142.3	152.2	59.2	29.666	34.0	

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Att. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Att. Th.
h. m.								h. m.							
4 30	+10.20	58.3	140.0	153.7	62.2	29.679	34.0	12 30	+6.04	56.1	146.6	161.6	56.0	29.898	40.2
5 0	10.28	58.8	139.2	156.0	64.3	29.666	34.8	13 0	6.22	57.0	171.4	175.1	56.5	29.906	40.2
5 30	10.24	59.0	137.4	155.0	65.0	29.659	35.6	13 30	8.49	58.0	159.6	168.4	57.5	29.915	39.0
6 0	10.33	60.0	136.0	154.2	66.0	29.663	36.0	14 0	7.17	58.0	163.5	163.5	57.7	29.931	38.5
6 30	11.44	61.0	132.8	155.8	66.5	29.666	36.2	14 30	7.49	58.2	151.7	159.0	57.8	29.895	38.9
7 0	11.59	61.5	133.0	157.8	66.0	29.670	37.0	15 0	8.05	58.6	146.3	160.0	58.1	29.880	38.9
7 30	11.00	61.5	133.0	157.6	65.0	29.675	37.0	15 30	9.49	58.5	147.0	162.3	58.5	29.865	38.7
8 0	10.09	61.0	128.9	155.8	63.8	29.675	37.2	16 0	8.35	58.8	145.3	161.5	58.5	29.862	38.0
8 30	9.48	60.5	123.8	158.7	62.8	29.678	36.5	16 30	11.19	59.0	139.3	160.2	58.5	29.876	38.0
9 0	9.49	59.5	138.5	158.8	61.4	29.693	35.3	17 0	11.24	59.6	151.2	173.2	58.9	29.862	38.0
9 30	8.07	58.0	133.0	159.0	59.8	29.701	34.3	17 30	12.00	60.0	168.5	144.6	59.0	29.866	38.0
10 0	vibrating		131.7	158.9	58.2	29.719	33.0	18 0	18.48	60.5	118.0	167.5	59.4	29.834	37.0
10 30	5.22	56.5	126.0	156.7	57.0	29.732	31.5	18 30	17.24	60.0	144.0	160.5	59.1	29.862	37.5
11 0	5.18	56.0	125.0	159.2	56.5	29.752	31.0	19 0	11.39	59.0	141.5	157.5	58.5	29.847	37.0
11 30	9.32	55.5	168.2	158.0	56.0	29.753	30.0	19 30	10.19	58.5	146.2	160.9	57.9	29.838	37.5
12 0	-1.25	54.2	147.0	161.5	54.8	29.755	29.7	20 0	10.11	58.0	145.5	162.2	57.0	29.826	37.2
12 30	3.48	54.0	141.0	159.9	54.6	29.752	29.7	20 30	12.13	57.5	132.3	165.1	56.6	29.823	37.3
13 0	3.39	55.0	151.5	dist'rb'd		29.753	29.0	21 0	12.41	57.2	129.0	158.3	56.8	29.799	37.5
13 30	+1.55	56.0	120.0	167.5	55.0	29.745	29.0	21 30	12.07	57.5	136.7	161.4	57.0	29.804	37.7
14 0	0.00	54.0	137.0	166.4	55.0	29.631	28.5	22 0	13.03	58.2	127.1	156.7	57.8	29.790	37.7
14 30	0.32	55.5	142.6	168.0	54.5	29.786	28.5	22 30	15.30	58.7	121.0	153.0	58.5	29.787	38.0
15 0	-0.12	56.0	152.9	166.1	55.3	29.802	28.3	23 0	15.05	59.4	115.7	160.4	59.1	29.785	37.8
15 30	+3.25	56.5	150.5	174.6	56.0	29.805	28.0	23 30	16.08	59.9	110.1	160.6	59.6	29.789	37.6
16 0	vibrating		dist'rb'd	dist'rb'd		29.823	27.5	Nov. 20.							
16 30	20.00	56.0				29.662	27.0	24 0	16.08	60.2	127.2	159.1	59.8	29.784	38.0
17 0	13.12	56.0				29.657	26.3	0 30	13.11	60.0	146.8	154.0	59.8	29.786	38.0
17 30	12.30	56.0	155.4	178.5	55.2	29.807	27.0	1 0	11.11	60.0	142.0	153.5	59.4	29.802	38.4
18 0	9.06	56.0	155.0	174.0	55.8	29.810	26.2	1 30	10.11	59.0	137.2	157.7	59.3	29.805	39.0
18 30	21.27	56.5				29.829	26.0	1 50	10.03	58.6	133.7	165.0	59.2		
19 0	19.16	56.5	122.6	161.4	55.4	29.850	25.3	2 0	10.10	58.6	132.4	165.8	59.0	29.801	39.0
19 30	19.16	56.7	134.6	192.0	55.4	29.841	25.0	2 10	10.11	58.6	129.7	168.9	59.0		
20 0	18.40	56.0	152.0	184.6	55.4	29.839	25.0	Nov. 22.							
20 30	18.40	56.1	151.6	172.6	55.4	29.846	25.0	1 50	-0.42	35.5	143.9				
21 0	18.07	56.1	166.7	173.5	55.4	29.858	25.5	2 0	0.49	35.5	143.5			29.933	34.2
21 30	12.24	56.0	161.9	167.3	55.0	29.870	25.1	2 10	1.06	35.6	142.2				
22 0	9.03	55.7	153.0	163.0	54.6	29.867	25.0	2 30	1.12	36.0	139.5			29.905	36.5
22 30	9.38	55.6	148.9	159.2	54.4	29.868	24.5	3 0	0.33	37.0	136.0			29.900	38.0
23 0	9.45	55.5	147.6	156.6	54.4	29.867	24.0	3 30	0.13	38.5	133.0			29.885	39.0
23 30	10.06	55.2	144.3	156.5	54.0	29.878	23.2	4 0	+1.45	40.5	132.5			29.906	40.0
Nov. 19.								4 30	2.15	42.7	131.5			29.874	40.5
24 0	9.33	54.6	126.0	156.2	53.8	29.892	23.4	5 0	3.05	44.5	131.5			29.862	41.5
0 30	10.38	54.0	138.0	154.0	53.0	29.904	23.3	5 30	3.36	46.2	132.5			29.844	43.0
1 0	8.45	53.4	143.2	153.2	52.5	29.906	24.0	6 0	4.45	47.5	131.5			29.826	44.7
1 30	8.11	53.0	145.0	154.8	52.0	29.936	25.6	6 30	4.07	48.5	130.0			29.756	45.0
2 0	8.07	53.1	146.0	157.5	52.2			7 0	4.37	49.7	132.0			29.773	45.8
2 10	7.49	53.3	143.7	154.2	52.2	29.936	27.4	7 30	5.07	51.0	133.0			29.749	46.1
2 30	7.49	53.6	144.0	154.8	53.0			8 0	6.04	52.0	135.0			29.725	46.0
3 0	8.25	54.0	143.0	156.0	54.5	29.943	30.0	8 30	5.09	52.5	134.0			29.715	46.0
3 30	8.44	55.0	139.0	158.5	56.0	29.910	34.0	9 0	6.43	52.8	135.2			29.644	46.8
4 0	8.35	56.0	137.0	160.0	56.0	29.907	37.0	9 30	6.01	53.4	135.6			29.675	47.0
5 0	8.35	57.0	135.0	157.0	57.5	29.907	38.0	10 0	6.32	54.4	137.0			29.610	47.7
6 0	9.43	58.0	135.0	157.2	57.0	29.902	39.0	10 30	7.17	55.8	139.7			29.643	48.5
7 0	9.40	60.0	134.0	159.0	54.0	29.937	38.0	11 0	8.49	57.0	140.9			29.613	50.0
7 30	9.12	58.6	134.7	159.1	58.8	29.935	38.8	11 30	8.15	57.5	142.9			29.599	51.7
8 0	9.07	58.3	136.2	157.3	58.4	29.936	38.8	12 0	7.26	59.0	143.0			29.586	54.0
8 30	9.01	58.3	138.6	155.6	58.4	29.924	38.8	12 30	6.16	60.0	142.8			29.574	56.0
9 0	8.33	58.0	139.6	156.4	58.0	29.930	38.2	13 0	10.41	60.5	142.3			29.578	57.5
9 30	7.28	56.6	140.0	157.4	56.6	29.912	36.0	13 30	10.53	61.0	142.5			29.560	57.5
10 0	7.20	56.5	139.8	157.5	56.2	29.911	36.2	14 0	10.14	61.8	142.5			29.594	57.5
10 30	6.01	56.0	140.4	158.8	55.9	29.909	36.1	14 30	10.32	62.0	142.0			29.527	56.3
11 0	6.31	55.7	138.4	159.5	55.5	29.881	36.0	15 0	10.15	62.5	141.6			29.506	56.0
11 30	6.13	56.6	137.0	158.3	55.4	29.887	37.0	15 30	11.08	62.8	141.8			29.503	57.3
12 0	6.04	55.7	140.8	160.0	55.6	29.891	39.1	16 0	11.06	63.0	141.2			29.484	56.4

Wires to the Horizontal Force Mag-
netometer accidentally broken.

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
16 30	+11.37	63.0	146.7			29.471	55.7	22 30	+9.23	57.0	138.5			29.790	32.5
17 0	11.44	62.5	145.8			29.459	55.5	23 0	9.20	57.5	139.0			29.802	32.0
17 30	10.49	62.5	143.0			29.458	55.3	23 30	9.20	57.0	138.5			29.808	32.0
18 0	10.11	62.4	145.1			29.484	55.5	Nov. 24.							
18 30	10.11	61.0	139.7			29.415	56.0	24 0	9.05	57.0	144.0			29.821	31.0
19 0	10.19	62.0	140.5			20.414	56.0	0 30	9.29	56.5	145.0			29.824	31.5
19 30	10.19	62.0	143.0			29.434	57.0	1 0	9.29	55.5	144.4			29.831	32.3
20 0	10.14	62.5	145.2			29.445	56.6	1 30	8.48	54.0	140.0			29.863	33.0
20 30	10.14	62.7	143.2			29.459	56.0	1 50	7.28	53.6	135.7			29.858	35.0
21 0	10.27	63.0	141.5			29.447	52.0	2 0	7.28	53.5	136.2			29.860	35.8
21 30	10.17	63.0	142.0			29.468	51.0	2 10	7.23	53.4	136.9			29.864	36.6
22 0	10.17	63.4	143.2			29.489	52.0	2 30	7.13	53.0	138.2			29.874	38.0
22 30	10.29	63.2	144.0			29.501	52.0	3 0	7.24	53.5	139.0			29.810	40.0
23 0	10.32	63.0	142.7			29.505	51.0	3 30	8.07	54.0	137.0			29.808	42.0
23 30	10.10	63.0	140.0			29.494	49.5	4 0	8.28	55.0	137.0			29.768	42.0
Nov. 23.								4 30	9.44	56.0	137.0			29.787	42.0
24 0	10.33	62.5	142.0			29.546	47.0	5 0	9.03	57.0	136.7			29.783	43.0
0 30	10.45	62.3	141.4			29.559	47.0	5 30	9.05	57.0	136.0			29.845	45.5
1 0	9.27	61.0	141.4			29.562	47.0	6 0	9.01	58.0	135.0			29.843	46.0
1 30	9.10	60.5	143.0			29.584	47.1	6 30	9.01	57.0	136.0			29.859	45.5
2 0	9.04	60.0	145.1			29.617	47.0	7 0	9.08	58.0	137.0			29.838	45.5
2 10	9.04	59.7	144.1			29.619	47.5	7 30	9.06	58.0	138.0			29.840	45.0
2 30	9.00	59.6	143.7			29.629	47.5	8 0	9.04	58.0	138.9			29.871	44.5
3 0	9.49	59.5	142.6			29.635	47.7	8 30	9.01	57.8	139.6			29.885	44.3
3 30	9.41	59.5	142.4			29.639	48.0	9 0	9.40	57.3	139.7			29.830	44.2
4 0	9.39	59.2	140.0			29.651	49.0	9 30	8.15	56.7	139.5			29.858	41.6
4 30	9.00	60.0	139.2			29.640	50.0	10 0	8.04	56.0	140.1			29.866	40.0
5 0	9.39	61.5	138.0			29.628	50.5	10 30	8.11	55.5	140.7			29.868	38.4
5 30	11.23	63.0	136.2			29.608	50.5	11 0	8.00	55.5	141.5			29.870	36.0
6 0	11.02	64.5	135.0			29.641	51.5	11 30	8.05	55.0	143.0			29.859	36.0
6 30	11.01	65.3	134.2			29.611	51.0	12 0	7.45	54.7	143.5			29.939	35.1
7 0	11.03	66.0	133.8			29.644	50.5	12 30	7.30	54.2	143.0			29.941	35.2
7 30	11.08	66.7	138.2			29.630	50.0	13 0	7.23	53.5	144.0			29.952	34.5
8 0	11.27	67.0	137.0			29.671	49.5	13 30	7.05	53.5	146.4			29.956	34.4
8 30	11.27	67.0	137.0			29.666	48.5	14 0	7.35	53.0	149.6			22.964	34.3
9 0	11.34	66.5	137.0			29.675	47.8	14 30	7.24	53.0	149.0			29.978	34.1
9 30	11.45	65.5	136.7			29.669	47.0	15 0	7.13	53.0	144.0			29.958	34.0
10 0	11.28	65.0	137.7			29.662	45.8	15 30	7.10	52.8	144.0			29.976	32.7
10 30	10.38	63.5	138.7			29.692	44.2	16 0	7.06	52.5	143.0			29.968	31.8
11 0	10.22	63.2	141.2			29.700	41.5	16 30	7.05	51.8	144.0			29.961	31.3
11 30	10.17	61.0	143.5			29.689	41.2	17 0	7.43	51.6	144.0			29.977	31.0
12 0	10.46	60.6	143.8			29.689	41.6	17 30	7.39	51.4	145.0			29.977	30.2
12 30	10.39	60.5	144.3			29.704	39.6	18 0	7.41	51.2	141.0			29.980	30.2
13 0	10.39	61.5	143.9			29.730	39.5	18 30	7.48	50.9	142.7			29.974	29.8
13 30	9.13	60.0	144.1			29.731	39.0	19 0	7.19	51.2	146.2			29.974	30.0
14 0	9.13	60.0	144.0			29.732	39.0	19 30	7.42	51.2	144.1			30.001	30.2
14 30	9.13	60.0	143.5			29.727	39.5	20 0	7.33	50.8	143.1			29.983	30.0
15 0	9.13	60.0	143.2			29.738	39.6	20 30	6.16	50.6	144.2			29.981	30.2
15 30	9.13	60.0	142.3			29.742	39.5	21 0	6.09	50.4	144.0			29.985	29.0
16 0	9.18	60.0	142.2			29.730	38.5	21 30	6.46	51.1	144.4			30.033	29.2
16 30	10.32	60.0	142.6			29.737	39.5	22 0	6.14	50.4	146.2			30.034	29.7
17 0	10.42	61.0	142.0			29.731	38.0	22 30	6.25	50.5	145.0			30.034	29.3
17 30	10.37	60.5	141.7			29.755	36.5	23 0	6.15	50.5	146.6			30.046	28.8
18 0	10.49	59.4	141.7			29.755	36.2	23 30	6.13	50.0	144.6			30.046	28.2
18 30	10.27	60.5	141.1			29.748	34.8	Nov. 25.							
19 0	10.33	60.2	142.3			29.748	34.0	24 0	6.46	49.4	146.7			30.030	29.1
19 30	10.27	59.5	143.0			29.747	33.0	0 30	5.30	48.9	145.0			30.063	30.1
20 0	9.15	57.6	143.0			29.755	32.5	1 0	5.05	47.8	144.1			30.050	31.0
20 30	9.39	58.5	143.0			29.768	33.0	1 30	5.18	48.0	145.0			30.046	32.1
21 0	9.48	57.5	142.2			29.766	33.0	2 0	5.39	49.0	145.1				
21 30	9.40	58.0	143.5			29.752	33.0	2 10	5.46	49.5	145.0			30.102	34.0
22 0	9.37	59.0	143.0			29.751	33.0	2 30	6.32	50.7	144.5			30.027	34.8
22 30	9.41	57.5	144.5			29.768	33.0	3 0	7.33	52.2	144.0			30.011	36.7

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
b. m.								b. m.							
3 30	+8.04	53.4	144.0			30.037	38.8	10 0	+8.03	57.2	141.1			29.480	31.5
4 0	8.20	54.2	140.7			30.028	40.3		Term	day	omit	ted.			
4 30	8.28	54.8	139.8			30.005	41.4	Nov. 29							
5 0	8.00	56.0	139.0			29.982	43.1		-2.02	30.5	143.8	137.2	29.2		
5 30	9.37	57.5	137.0			29.954	44.4		2.00	30.5	144.1	137.7	29.0	29.987	22.4
6 0	10.00	58.8	136.0			29.944	43.8		1.20	31.0	142.5	135.9	29.5	29.944	21.8
6 30	10.00	58.0	136.0			29.923	43.2		1.33		141.7	136.7	30.0	29.945	21.0
7 0	9.35	59.0	137.0			29.903	42.1		1.10	32.8	140.9	136.6	31.0	29.906	20.8
7 30	9.35	59.2	138.0			29.885	41.5		+0.07	34.7	140.0	137.5	34.5	29.893	21.0
8 0	9.43	58.7	138.0			29.894	40.5		1.05	36.7	139.7	138.3	36.5	29.880	21.2
8 30	10.02	60.0	139.3			29.889	40.0		1.32	38.5	139.2	138.1	38.5	29.867	21.4
9 0	9.38	59.6	140.3			29.876	40.2		2.32	40.8	139.2	139.2	41.0	29.895	21.0
9 30	9.40	59.0	141.2			29.871	39.5		2.46	43.0	139.0	140.6	43.0	29.841	22.8
10 0	9.32	59.2	143.0			29.885	39.2		4.32	44.5	140.0	142.0	44.8	29.785	23.0
10 30	9.28	58.5	143.0			29.876	38.5		5.11	46.0	140.5	142.8	46.0	29.787	23.0
11 0	9.19	59.0	143.0			29.808	37.7		5.22	47.0	140.2	143.1	46.5	29.803	23.0
11 30	9.29	59.0	147.0			29.806	36.3		5.19	47.0	140.5	143.8	47.0	29.818	22.8
12 0	9.34	60.0	144.0			29.841	34.2		5.04	46.3	141.3	144.5	46.0	29.800	22.2
12 30	9.09	58.7	142.6			29.798	33.0		4.42	46.3	143.0			29.791	22.0
13 0	9.02	58.2	142.9			29.798	33.0		5.05	46.6	142.8	143.8	46.0	29.802	21.8
13 30	8.40	58.0	143.0			29.861	33.0				142.8	143.8	46.0	29.789	20.5
14 0	8.42	58.0	142.8			29.850	33.0		5.42	47.3	142.9	143.7	46.3	29.789	21.8
14 30	8.36	57.6	143.0			29.844	32.5		5.29	47.0	143.0	144.0	47.0	29.785	22.0
15 0	8.37	57.7	143.0			29.792	32.8		5.29	47.0	143.0	144.0	47.0	29.777	22.0
15 30	9.06	57.7	142.7			29.768	32.2		5.05	46.8	142.7	144.5	47.0	29.801	21.0
16 0	9.06	57.6	143.0			29.810	32.5		5.04	46.5	142.0	144.0	47.0	29.778	21.0
16 30	8.49	57.5	142.5			29.748	32.5		4.45	46.0	142.7	144.5	47.0	29.773	22.0
17 0	9.16	57.7	142.6			29.732	31.8		3.29	43.5	143.0	144.8	42.0	29.858	24.0
17 30	9.16	60.0	142.9			29.736	33.2		3.09	43.0	143.1	143.0	41.3	29.854	23.8
18 0	9.35	59.1	142.5			29.730	33.6		3.18	43.2	142.2	143.2	41.4	29.858	23.2
18 30	9.25	60.0	142.9			29.688	34.0		4.39	44.0	142.2	142.8	43.5	29.854	23.1
19 0	8.23	57.4	142.9			29.622	34.1		4.21	45.0	141.9	142.9	44.0	29.868	23.0
19 30	8.44	57.7	142.4			29.632	34.8		5.12	46.5	141.2	143.6	45.8	29.878	22.8
20 0	8.45	58.0	142.5			29.623	35.6		5.34	47.5	142.2	144.4	46.7	29.906	22.2
20 30	8.48	58.0	143.0			28.603	34.5		5.36	48.0	141.1	145.0	47.5	29.897	22.0
21 0	8.32	58.5	143.0			29.582	34.0		6.01	49.0	142.0	144.9	48.0	29.930	22.0
21 30	8.08	58.0	143.0			29.554	33.1		6.31	49.5	143.0	145.7	49.0	29.932	22.1
22 0	8.08	56.9	143.0			29.607	34.6		6.49	50.5	143.3	146.6	49.5	29.939	21.6
22 30	8.08	56.9	143.0			29.621	34.5		7.11	51.0	142.3	146.3	50.5	29.956	21.1
23 0	8.21	56.5	143.0			29.570	33.5		7.17	51.5	142.8	146.7	51.0	29.966	21.0
23 30	8.41	58.0	143.7			29.526	34.0		7.31	51.5	143.0	147.1	51.0	29.987	20.0
Nov. 26.								23 30	8.04	52.5	143.6	147.6	52.0	30.008	20.2
24 0	8.41	58.0	145.0			29.508	35.0	Nov. 30.							
0 30	8.41	57.9	143.0			29.503	39.6	24 0	8.04	52.5	143.6	148.0	52.0	30.022	19.5
1 0	8.41	57.7	143.0			29.562	40.0	1 30	7.21	51.3	143.6			30.060	21.0
1 30	9.04	57.5	144.8			29.564	40.3	1 50	6.46	50.7	144.2	149.5	49.3	30.083	20.8
2 0	9.20	57.7	145.7			29.562	40.7	2 0	6.37	50.4	144.3	149.7	49.0	30.082	20.9
2 10	9.28	57.8	146.2			29.576		2 10	6.32	50.0	144.7	149.7	48.5	30.085	
2 30	9.24	58.0	144.1			29.545	41.0	2 30	7.15	49.3	144.0	148.7	47.9	30.112	23.0
3 0	9.39	58.5	143.0			29.546	42.0	3 0	7.23	49.3	143.3	148.8	48.2	30.093	23.1
3 30	9.43	58.7	140.4			29.498	40.5	3 30	6.42	49.8	142.3	149.0	51.0	30.117	24.5
4 0	10.02	59.5	141.2			29.477	36.0	4 0	7.06	50.6	141.1	149.3	55.0	30.125	26.0
4 30	9.47	59.5	140.6			29.423	34.5	4 30	7.35	52.0	139.3	152.2	59.0	30.114	26.5
5 0	9.25	58.5	140.2			29.457	33.0	5 0	8.08	53.0	138.4	154.3	61.0	30.098	28.0
5 30	9.08	58.0	140.2			29.443	33.5	5 30	8.03	53.5	137.9	154.0	61.7	30.095	28.8
6 0	9.00	67.5	139.0			29.442	33.0	6 0	8.49	54.7	137.5	154.4	62.0	30.101	30.0
6 30	8.28	57.2	139.0			29.434	33.0	6 30	9.34	56.1	138.1	154.3	62.0	30.118	29.1
7 0	9.00	57.6	140.5			29.461	33.1	7 0	9.42	56.8	138.9	154.2	61.3	30.112	29.9
7 30	8.26	57.4	138.0			29.453	32.9	7 30	9.39	57.2	139.6	153.7	60.8	30.123	29.8
8 0	8.26	57.3	137.4			29.454	32.6	8 0	9.22	56.5	140.5	153.5	59.5	30.126	29.3
8 30	8.26	57.4	139.0			29.460	32.5	8 30	9.11	56.2	142.0	153.2	59.9	30.134	29.3
9 0	8.26	57.8	140.0			29.468	31.6	9 0	9.16	56.2	143.2	152.8	59.5	30.143	29.3
9 30	8.25	57.5	139.8			29.467	31.0	9 30	9.15	56.5	142.5	151.9	59.0	30.145	27.6

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
10 0	+9.21	56.5	142.5	152.4	59.5	30.151	27.0	16 30	+9.34	56.5	142.0	154.9	55.2	30.130	31.3
10 30	9.21	56.5	142.5	152.4	59.0	30.149	26.3	17 0	9.34	56.0	140.2	154.1	54.8	30.148	30.8
11 0	9.29	56.5	142.8	152.7	59.5	30.155	25.0	17 30	9.40	56.3	141.4	154.2	55.0	30.142	30.6
11 30	9.29	57.0	142.4	152.6	58.5	30.155	23.4	18 0	10.03	56.3	144.0	155.1	55.0	30.153	31.2
12 0	9.29	56.5	142.2	153.1	57.5	30.163	23.2	18 30	11.33	56.0	138.8	152.0	55.0	30.159	31.0
12 30	9.25	56.5	142.9	153.1	57.0	30.169	20.9	19 0	12.32	57.0	136.7	151.3	55.3	30.169	30.8
13 0	9.25	56.5	142.9	152.5	57.0	30.142	20.2	19 30	12.02	57.0	140.7	152.4	55.0	30.172	31.2
13 30	9.32	56.5	142.9	152.1	57.0	30.141	20.6	20 0	12.23	56.3	143.8	153.8	54.7	30.174	31.3
14 0	9.26	56.5	142.9	152.6	56.5	30.141	19.8	21 30	11.15	55.3	144.0	153.3	54.7	30.254	31.3
14 30	9.16	56.0	142.9	152.7	56.0	30.204	19.0	22 0	10.42	55.0	144.4	152.7	53.0	30.147	31.9
15 0	9.16	56.0	142.5	152.1	56.0	30.184	19.0	22 30	9.07	55.0	143.4	151.9	53.0	30.046	32.5
15 30	9.05	55.5	142.5	152.7	55.3	30.186	18.2	23 0	9.47	53.5	144.5	151.8	54.0	30.058	32.5
16 0	9.00	55.4	142.9	151.6	55.1	30.184	18.1	23 30	9.34	54.0	143.8	151.7	54.5	30.064	32.5
16 30	9.08	55.5	142.3	150.8	55.5	30.183	17.5	Dec. 2							
17 0	9.16	55.6	142.2	151.0	55.6	30.185	17.0	24 0	10.04	54.6	141.6	151.2	54.7	30.096	32.7
17 30	9.19	55.6	142.4	151.0	55.2	30.198	16.0	0 30	10.25	55.5	141.5	150.8	55.0	30.130	33.0
18 0	8.47	55.0	142.3	151.1	54.6	30.197	16.5	1 0	10.03	55.5	142.0	151.2	55.0	30.153	34.0
18 30	8.46	54.8	142.2	150.3	54.6	30.197	17.0	1 30	9.46	56.6	143.4	152.0	60.3	30.164	35.0
19 0	9.08	55.0	142.2	149.8	54.2	30.184	17.0	1 50	9.33	55.6	144.5	152.7	54.8	30.188	36.0
19 30	9.09	55.0	142.5	149.3	54.2	30.187	16.2	2 0	9.30	55.5	145.0	152.7	54.8	30.192	35.5
20 0	9.09	55.0	142.0	149.1	54.4	30.207	16.0	2 10	9.26	55.2	144.7	153.5	54.6	30.197	35.5
20 30	9.16	55.0	142.2	149.1	54.4	30.214	17.0	2 30	9.19	55.0	145.0	153.4	54.3	30.201	36.0
21 0	9.14	55.0	142.5	149.0	54.5	30.192	18.0	3 0	9.20	54.5	145.2	153.2	55.2	30.200	39.0
21 30	9.23	55.0	144.7	149.0	55.0	30.184	20.0	3 30	10.06	57.0	141.9	154.0	58.0	30.199	41.0
22 0	9.17	54.5	145.0	149.0	55.0	30.187	20.0	4 0	11.12	58.0	140.0	156.7	62.0	30.224	41.0
22 30	9.11	55.0	145.0	149.2	55.0	30.189		4 30	12.01	60.3	141.1	158.2	66.3	30.217	41.8
23 0	9.02	55.0	143.8	149.0	54.5	30.184	19.5	5 0	12.31	61.6	138.0	160.6	69.0	30.203	41.7
23 30	8.30	55.0	144.0	149.5	53.5	30.194	18.0	5 30	13.02	62.8	135.8	160.6	71.0	30.228	41.5
Dec. 1.								6 0	13.34	64.0	134.5	161.8	72.0	30.219	42.0
24 0	8.00	53.5	143.0	149.8	53.5	30.187	17.0	6 30	13.44	64.8	135.0	162.3	72.1	30.199	41.8
0 30	7.48	53.5	143.9	148.8	53.5	30.230	19.0	7 0	13.42	65.0	135.8	163.2	71.4	30.197	42.0
1 0	7.38	51.0	142.5	143.2	50.5	30.242	19.8	7 30	13.38	65.2	137.0	162.3	71.0	30.189	42.6
1 30	6.10	49.5	143.0	148.9	48.0	30.250	19.5	8 0	13.16	65.0	137.9	160.9	69.0	30.177	42.0
2 0	6.38	48.7	144.7	147.7	47.0		21.0	8 30	13.10	60.0	138.3	161.6	68.5	30.157	41.8
2 10	6.31	48.4	145.3	147.6	46.5	30.258	22.2	9 0	12.32	63.5	140.0	161.1	67.0	30.137	41.3
2 30	6.28	48.3	145.1	148.5	46.5			9 30	12.12	61.5	141.0	159.9	65.5	30.183	37.5
3 0	6.28	48.0	145.8	146.5	46.5	30.259	23.5	10 30	11.00	58.5	142.8	158.4	61.0	30.239	34.0
3 30	6.28	48.5	145.0	146.5	47.8	30.266	25.0	11 0	10.35	58.0	143.7	157.8	59.0	30.219	33.3
4 0	8.03	51.0	142.5	146.4	54.6	30.273	29.8	11 30	10.16	56.7	144.0	157.6	57.3	30.208	32.0
4 30	9.14	53.5	141.5	148.8	59.0	30.238	31.0	12 0	9.45	56.0	142.5	157.6	56.0	30.246	31.2
5 0	10.11	55.7	140.3	152.7	62.7	30.244	31.6	12 30	9.29	55.5	142.5	157.7	55.0	30.227	30.2
5 30	11.31	57.5	138.9	154.3	55.5	30.251	31.5	13 0	9.15	55.3	144.7	164.3	55.0	30.251	29.5
6 0	12.44	59.0	138.5	155.3	56.0	30.231	34.0	13 30	9.00	55.7	146.2	163.8	55.8	30.234	30.0
6 30	12.44	60.0	137.4	155.5	67.0	30.213	36.0	14 0	9.12	56.0	141.0	159.0	56.7	30.246	29.5
7 0			136.8	156.5	66.5	30.199	36.0	14 30	9.31	57.0	147.1	156.9	56.7	30.198	29.5
7 30	12.42	60.5	136.3	157.4	65.8	30.190	36.2	15 0	9.18	56.5	147.9	158.8	56.2	30.251	27.2
8 0	11.30	59.5	135.7	156.3	65.0	30.178	36.0	15 30	9.03	55.7	142.7	158.8	55.8	30.265	26.2
8 30	11.38	60.0	136.9	155.3	64.6	30.178	35.0	16 0	9.03	55.7	145.2	157.8	55.6	30.229	26.0
9 0	11.32	59.8	138.5	155.7	64.0	30.183	33.8	16 30	8.46	55.3	144.9	156.4	55.3	30.246	26.0
9 30	11.16	59.2	137.7	155.7	62.8	30.181	31.9	17 0	9.11	55.0	141.1	155.0	55.0	30.253	26.5
10 30	9.23	57.5	139.2	158.2	59.0	30.178	30.8	17 30	10.20	55.6	142.3	154.4	56.9	30.250	26.0
11 0	7.29	57.5	137.1	157.8	57.3	30.182	29.5	18 0	11.35	56.9	145.0	155.0	59.5	30.262	24.5
11 30	9.40	57.0	141.5	160.0	56.2	30.182	29.2	18 30	12.00	57.3	135.2	155.2	58.4	30.226	26.1
12 0	9.11	57.0	145.0	159.4	55.6	30.179	30.9	19 0	11.35	57.8	139.5	153.8	58.2	30.253	24.5
12 30	8.42	56.5	141.1	157.6	55.6	30.179	30.6	19 30	11.42	57.7	140.7	154.4	58.0	30.306	26.1
13 0	9.10	56.5	143.0	157.2	55.8	30.179	30.4	20 0	11.47	58.5	144.0	155.1	58.7	30.265	27.8
13 30	9.18	56.5	145.2	156.0	56.0	30.179	31.2	20 30	13.01	59.3	150.0	156.5	59.4	30.255	27.5
14 0	9.02	56.1	142.9	157.0	55.5	30.163	29.6	21 0	13.04	59.5	143.5	156.1	59.3	30.248	27.5
14 30	9.20	56.1	143.2	154.9	55.8	30.146	31.8	21 30	12.35	59.3	140.6	156.9	59.0	30.242	26.8
15 0	9.33	56.6	142.8	154.5	56.3	30.147	31.8	22 0	14.49	59.5	138.2	153.0	59.0	30.234	28.0
15 30	9.41	56.7	142.0	153.9	56.5	30.150	31.6	22 30	15.48	60.0	127.1	159.0	60.0	30.238	29.0
16 0	9.34	56.5	142.0	154.8	55.3	30.141	31.5	23 0	16.18	60.5	130.5	150.3	60.5	30.223	28.5
								23 30	16.48	60.5	142.2	149.1	60.0	30.214	27.5

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
Dec. 3. h. m.								h. m.							
24 0	+14.13	60.0	144.0	150.4	59.5	30.217	26.2	7 0	+7.08	50.5	136.5	150.2	55.6	29.825	32.8
0 30	13.29	60.0	144.9	153.1	59.8	30.223	26.8	7 30	8 31	51.6	136.4	151.0	56.5	29.832	33.1
1 0	13.08	58.0	141.5	151.8	60.0	30.214	27.0	8 0	8 22	53.0	139.0	150.6	57.2	29.850	33.2
1 30	12.20	59.0	141.0	157.0	60.0	30.219	29.5	8 30	8 33	53.4	139.8	150.6	57.2	29.855	33.1
1 50		136.8	161.0	59.5	30.289	31.5		9 0	8 33	53.5	140.2	151.0	56.8	29.862	32.2
2 0	11.40	59.2	136.3	163.2	59.5	30.204		9 30	8 13	53.0	141.3	151.3	56.1	29.864	31.3
2 10	11.32	59.2	129.4	163.0	59.2	30.205	31.5	10 0	8 48	52.5	142.1	150.0	55.0	29.879	30.0
2 30	11.23	59.0	112.5	173.4	59.0	30.200	32.8	10 30	7 23	51.2	143.0	149.0	53.6	29.906	28.0
3 0	11.38	59.2	112.0	162.0	59.3	30.203	38.2	11 0	7 23	51.2	143.0	148.4	52.2	29.908	28.0
3 30	12.12	60 7	118.5	156.3	61.0	30.193	42.0	11 30	7 11	50.8	142.8	148.6	52.0	29.913	27.0
4 0	12.49	62.2	128.3	158.7	62.5	30.188	43.0	12 0	7 14	50.7	143.0	148.4	51.2	29.928	26.3
4 30	13.11	62.8	131.7	164.1	63.4	30.140	42.6	12 30	7 10	50.5	142.7	149.0	50.7	29.945	26.2
5 0	12.32	63.0	133.2	164.9	63.4	30.139	43.7	13 0	7 39	49.8	142.1	150.0	49.7	29.962	26.0
5 30	12.14	62.8	135.0	164.7	63.0	30.122	44.2	14 0	7 10	49.0	142.0	149.0	48.2	29.962	25.4
6 0	11.30	62.5	130.5	164.5	62.5	30.074	46.0	14 30	7 12	48.0	145.0	150.2	46.0	29.974	25.0
6 30	8.25	62.0	132.0	163.0	61.7	30.075	46.0	15 0	6 39	46.4	144.0	148.6	45.5	29.968	24.4
7 0	9.25	61.2	136.2	159.8	61.0	30.058	46.0	15 30	5 16	46.5	146.0	147.7	44.5	29.958	23.8
7 30	10.10	60.5	136.0	161.2	60.5	30.038	46.0	16 0	5 27	46.0	144.4	147.3	44.3	30.002	23.0
8 0	10.14	60.0	134.5	157.0	61.0	30.011	42.0	16 30	5 31	47.0	141.1	147.2	45.5	29.996	23.5
8 30	11.17	60.8	136.0	159.2	62.0	30.007	40.8	17 0	5 31	48.0	142.0	148.2	47.5	30.015	23.7
9 0	11.25	62.5	136.5	159.0	62.8	29.991	39.3	17 30	6 11	49.3	142.8	147.8	48.8	30.016	23.6
9 30	11.29	62.0	137.5	160.5	61.9	29.957	39.6	18 0	6 07	49.4	143.6	149.0	49.0	29.991	24.0
10 30	10.25	60.5	141.5	159.0	61.0	29.922	39.0	18 30	6 30	49.0	143.0	149.7	49.1	30.020	23.0
11 0	10.09	60.5	142.5	164.0	60.0	29.850	39.0	19 0	6 47	49.7	141.7	148.6	49.0	30.009	24.0
11 30	10.18	60.0	148.0	161.5	59.8	29.891	39.0	19 30	7 00	49.3	143.0	150.8	49.0	30.027	21.8
12 0	8.48	61.0	153.7	163.7	59.0	29.850	39.0	20 0	7 23	50.3	143.0	151.0	50.8	30.033	22.0
12 30	8.29	57.5	146.8	162.2	58.0	29.801	39.6	20 30	7 38	51.0	147.4	151.3	51.6	30.039	21.8
13 0	10.02	58.0	146.7	164.6	57.7	29.747	39.9	21 0	7 38	50.8	149.0	151.0	50.8	30.046	22.4
13 30	10.27	58.0	146.0	161.5	57.7	29.715	40.5	21 30	7 22	50.8	147.5	151.0	51.0	30.053	22.1
14 0	9.20	58.0	146.6	162.8	57.7	29.646	41.0	22 0	7 32	51.4	149.0	150.8	51.6	30.043	21.0
14 30	9.33	58.0	149.0	161.8	57.4	29.607	42.0	22 30	8 00	52.1	149.2	150.0	52.7	30.061	20.7
15 0	9.36	57.3	151.3	160.8	56.7	29.525	42.5	23 0	8 18	52.7	149.0	150.1	53.5	30.065	19.8
15 30	9.18	56.5	145.9	160.3	55.8	29.513	43.2	23 30	8 36	53.0	145.2	153.8	54.0	30.063	19.8
16 0		136.0	161.3	55.2	29.465	44.4			9 05	53.5	147.5	153.4	54.3	30.087	19.0
16 30	11.37	56.5	133.9	158.9	54.5	29.438	44.5	Dec. 8.							
17 0	10.03	55.5	140.6	156.9	54.1	29.394	45.0	24 0	9 37	53.7	151.0	151.1	56.0	30.096	20.7
17 30	9.22	55.3	144.8	156.5	53.6	29.370	44.7	1 0	9 34	55.4	141.6	151.4	56.4	30.042	21.2
18 0	9.06	55.0	144.9	154.9	53.2	29.284	45.9	1 30	10 38	55.3	143.5	153.1	56.2	30.048	23.6
Dec. 4.								1 50	9 20	54.6	145.6	153.8	55.0	30.055	
1 50	8.18	51.5	143.7	150.3	49.9	29.167	46.2	2 0	9 12	54.4	145.1	154.5	55.0	30.055	25.0
2 0	8.18	51.5	144.4	149.8	49.8	29.167	47.0	2 10	8 46	54.1	143.5	153.9	54.5	30.059	25.5
2 10	8.18	51.5	144.0	150.6	49.8	29.157	47.1	2 30	8 18	53.5	142.5	155.3	53.6	30.082	26.7
4 0						29.086	51.5	3 0	8 18	52.8	140.0	159.2	53.3	30.090	28.5
Dec. 6.								3 30	8 12	52.5	133.5	162.6	53.8	30.092	30.5
1 50	2.44	39.7	144.9	140.7	39.0	29.297	35.2	4 0	7 49	59.0	126.7	166.6	56.0	30.070	33.0
2 0	3.13	40.3	144.6	142.1	39.5	29.294	35.0	4 30	7 47	54.5	129.1	165.3	58.8	30.050	34.5
2 10	3.27	41.0	145.6	142.5	40.2	29.302	35.5	5 0	9 38	57.0	127.5	165.7	62.5	30.118	35.5
Dec. 7.								5 30	9 26	58.5	127.5	168.5	64.5	30.080	36.0
1 0	1.20	29.0	143.2	136.0	26.5	29.619	24.7	6 0	9 26	58.5	127.7	167.4	65.8	30.043	38.0
1 30	-1.20	29.1	144.6	136.3	26.2	29.777	25.0	6 30	9 19	58.0	127.0	166.0	65.0	30.000	37.0
1 50		145.5	135.0	27.0				7 0	9 36	59.0	125.0	164.0	63.8	29.990	37.5
2 0	0.46	29.6	145.7	134.7	27.0	29.784	26.0	7 30	9 36	59.0	129.0	162.0	62.7	29.990	39.0
2 10	0.42	30.0	146.1	134.1	27.7	29.785	26.0	8 0	8 23	58.7	128.0	161.4	61.8	29.977	38.4
2 30	+1.37	31.5	145.4	135.8	30.0	29.772	28.0	8 30	8 18	58.1	126.5	159.1	60.5	29.964	37.2
3 0	1.40	34.5	146.5	137.2	36.0	29.766	29.0	9 0	8 03	57.5	131.2	159.4	59.3	29.951	37.0
3 30	3.23	38.0	145.8	141.0	41.0	29.759	30.0	9 30	7 36	57.0	132.2	156.2	58.7	29.938	36.3
4 0	5.00	42.0	142.5	145.2	44.5	29.752	31.0	10 0	7 37	57.0	136.5	158.3	57.8	29.925	34.0
4 30	6.00	44.5	141.6	147.0	45.0	29.768	31.0	10 30	8 05	57.0	141.0	160.5	58.0	29.913	34.0
5 0	6.00	45.0	140.0	148.0	51.0	29.769	32.0	11 0	9 33	58.0	143.0	159.0	58.0	29.969	32.0
5 30	6.17	46.5	137.2	150.0	54.0	29.759	32.0	11 30	9 45	58.0	144.0	161.8	58.0	30.025	31.5
6 0	6.28	48.5	135.8	150.0	55.0	29.752	31.0	12 0	9 32	55.6	144.3	158.3	57.0	30.012	31.0
6 30	7.42	49.2	137.0	151.5	55.0	29.845	31.0	12 30	9 32	55.5	145.8	156.4	56.0	30.010	30.0
								13 0	9 26	54.4	146.2	156.3	54.5	30.008	29.8

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
13 30	+8.22	54.8	146.0	155.5	54.2	29.996	29.7	19 30	+12.41	60.0	131.2	155.0	59.0	29.759	39.3
14 0	9.36	55.0	145.2	155.5	54.6	29.983	30.4	20 0	13.28	61.2	137.7	155.7	60.8	29.752	39.4
14 30	9.08	55.4	144.5	155.9	55.2	29.973	30.5	20 30	13.46	62.2	143.3	157.0	62.0	29.745	38.0
15 0	9.14	55.7	144.0	155.0	55.5	29.960	32.3	21 0	13.45	62.4	144.8	158.0	62.0	29.738	37.0
15 30	9.28	56.3	143.0	155.4	56.5	29.945	33.0	21 30	10.17	62.3	139.6	159.0	62.0	29.734	37.0
16 0	10.46	57.1	142.5	155.6	57.4	29.945	34.0	22 0	12.02	62.0	141.0	158.7	61.6	29.730	37.0
16 30	10.46	57.4	142.2	156.0	57.5	29.951	35.9	22 30	12.44	61.7	143.0	156.3	61.3	29.727	36.0
17 0	10.35	57.1	141.8	156.0	57.3	29.937	36.6	23 0	12.16	62.0	144.9	155.3	61.3	29.730	36.0
18 0	9.36	56.5	141.0	155.9	56.5	29.922	36.8	23 30	12.06	61.7	144.0	157.5	61.3	29.733	35.0
18 30	9.15	56.5	141.0	155.5	56.8	29.904	37.0	Dec. 10							
19 0	9.15	57.0	141.9	155.7	56.2	29.904	37.0	24 0	11.19	60.4	145.5	156.0	60.0	29.737	34.0
19 30	9.15	57.0	141.0	155.5	56.6	29.887	37.4	0 30	12.36	60.5	145.9	155.8	60.5	29.832	33.5
20 0	9.15	57.5	143.0	155.5	56.6	29.890	38.4	1 0	12.11	61.0	146.0	157.4	61.0	29.829	33.5
20 30	9.37	57.5	141.0	154.9	56.6	25.859	39.0	1 30	11.44	61.0	138.1	161.9	60.6	29.832	33.6
21 0	10.09	58.5	141.7	154.8	57.5	29.871	40.0	1 50	11.44	60.5	129.7	163.4	60.0		
21 30	10.01	60.0	143.5	155.3	58.7	29.855	39.6	2 0	11.34	60.0	128.2	163.2	60.0	29.824	35.0
22 0			142.7	155.9	60.0	29.845	40.0	2 10	11.28	59.8	127.9	161.9	59.5		
22 30	10.31	60.0	143.0	156.1	59.5	29.843	40.0	2 30	11.12	59.5	132.2	159.6	59.8	29.825	38.0
23 0	10.31	60.0	143.2	156.5	59.5	29.810	40.4	3 0	11.24	58.2	136.8	156.4	58.1	29.817	41.8
23 30	10.36	60.0	142.2	156.0	60.5	29.826	40.1	3 30	11.12	58.0	141.1	155.4	58.5	29.829	44.4
Dec. 9.								4 0	11.16	58.5	142.5	156.1	59.4	29.824	44.5
24 0	11.10	61.7	143.1	156.0	61.0	29.813	40.2	4 30	11.17	58.0	140.0	156.5	60.0	29.786	46.0
0 30	11.21	60.0	145.2	156.0	61.5	29.814	41.0	5 0	12.13	59.0	138.5	157.5	60.0	29.802	47.0
1 0	12.48	62.0	144.5	155.7	62.0	29.831	42.0	5 30	12.24	58.0	138.0	159.0	60.0	29.771	47.0
1 30	12.48	62.0	144.5	157.5	62.0	29.808	42.0	6 0	11.11	58.0	137.0	158.5	60.0	29.763	46.0
2 0	11.34	60.2	144.3	158.1	61.5	29.760	42.2	6 30	11.47	58.0	137.0	158.5	60.0	29.791	47.0
2 10	11.28	60.9	144.0	158.5	61.2	29.764	42.5	7 0	11.38	59.0	137.0	157.5	59.0	29.767	47.0
2 30	11.17	60.5	144.0	159.1	61.0	29.769	42.5	7 30	10.27	59.0	136.5	158.7	59.0	29.751	46.0
3 0	12.05	60.5	145.0	158.7	60.5	29.768	42.5	8 0	10.00	58.6	136.8			29.752	
3 30			143.4			29.732		8 30	10.14	58.5	137.1	156.2	58.5	29.759	43.5
4 0			141.8			29.696		9 0	10.00	58.2	137.0	157.1	58.1	29.746	42.5
4 30			140.2			29.660		9 30	10.21	58.2	137.0	158.0	57.0	29.731	41.0
5 0	10.18	57.5	138.0	159.4	56.0	29.624	45.0	10 0			139.3			29.723	
5 30	10.00	57.0	136.0	158.5	56.0	29.620	45.0	10 30	9.12	56.0	141.6	155.0	56.2	29.695	40.0
6 0	9.42	57.0	134.1	158.1	55.5	29.631	46.0	11 0	9.32	56.0	143.7	153.8	55.2	29.678	41.0
6 30	10.00	57.5	134.9	156.0	56.0	29.622	48.0	11 30	9.44	56.5	141.2	154.5	56.1	29.668	41.0
7 0	10.00	58.0	132.9	155.5	56.5	29.734	46.2	12 0	9.49	57.5	141.7	154.8	57.2	29.656	41.0
7 30	9.39	58.0	134.8	156.5	56.8	29.715	45.4	12 30	10.10	57.9	142.0	154.4	58.0	29.641	41.0
8 0	9.40	58.0	134.0	155.0	56.7	29.731	47.4	13 0	10.35	58.6	142.0	155.0	59.4	29.616	41.1
8 30	10.05	59.5	136.6	155.5	56.5	29.734	46.9	13 30	11.36	59.5	142.4	155.3	60.0	29.598	41.3
9 0	10.00	58.5	137.0	154.5	57.9	29.739	46.0	14 0	11.00	59.4	142.3	155.9	60.0	29.562	41.5
9 30	10.30	59.6	137.6	154.8	59.0	29.715	45.0	14 30	12.00	60.0	143.0	157.0	60.0	29.541	41.8
10 0	10.46	60.0	140.5	154.7	59.8	29.717	45.0	15 0	11.41	59.0	143.5	156.0	59.6	29.532	42.0
10 30	11.13	60.3	139.6	155.0	60.7	29.741	44.0	15 30	11.43	59.0	143.0	156.5	59.5	29.520	42.0
11 0	11.35	61.5	141.0	155.6	61.5	29.726	43.3	16 0	11.40	58.8	142.0	156.0	59.2	29.508	42.6
11 30	12.02	62.3	141.5	155.0	62.6	29.725	43.0	16 30	11.43	58.7	142.0	156.7	59.0	29.488	43.0
12 0	12.11	62.5	141.3	156.4	62.8	29.715	41.2	17 0	11.36	58.5	141.8	156.8	58.5	29.470	42.5
12 30	12.36	62.5	141.5	157.0	62.0	29.731	41.5	17 30	11.32	58.5	142.0	156.3	58.0	29.446	43.0
13 0	12.26	61.5	142.0	157.0	61.5	29.742	42.0	18 0	11.27	58.0	141.5	156.0	58.0	29.436	44.0
13 30	12.26	61.0	142.0	156.9	61.0	29.744	42.1	18 30	11.27	58.0	141.0	156.0	57.8	29.422	44.8
14 0	12.32	61.5	143.0	156.5	61.5	29.746	42.1	19 0	11.29	58.0	141.5	155.0	57.6	29.422	45.0
14 30	12.32	61.5	143.0	156.0	61.0	29.744	42.0	19 30	11.34	58.0	141.0	155.0	57.6	29.414	45.5
15 0	12.03	61.0	143.0	156.2	60.6	29.763	42.0	20 0	11.01	58.5	141.5	154.5	58.0	29.416	47.2
15 30	12.25	61.0	143.0	156.5	60.5	29.758	41.0	20 30	11.17	59.5	141.7	154.8	59.8	29.391	49.2
16 0	12.25	61.0	143.0	157.0	60.5	29.760	41.0	21 0	12.09	61.2	141.8	155.3	61.3	29.378	49.0
16 30	11.12	61.0	141.8	158.0	60.5	29.770	40.5	21 30	12.48	63.0	142.3	156.0	63.6	29.365	49.0
17 0	11.04	60.5	144.0	158.5	59.5	29.766	40.5	22 0	13.32	64.3	142.1	157.0	65.2	29.354	49.1
17 30	11.48	60.5	143.0	158.9	59.5	29.768	39.5	22 30	14.08	65.5	142.1	158.0	66.8	29.334	49.0
18 0	11.48	59.0	148.1	157.5	58.5	29.763	39.0	23 0	14.34	66.5	142.4	159.2	68.0	29.327	49.5
18 30	11.48	59.0	142.9	156.8	58.3	29.757	39.0	23 30	14.30	67.0	142.2	160.0	68.5	29.326	49.0
19 0	11.48	60.0	146.0	159.5	58.3	29.772	39.5	Dec. 11.							
	11.48	59.5	137.0	162.0	57.3	29.766	39.0	24 0	14.27	67.0	142.3	160.6	68.0	29.329	48.0

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
Dec. 13.								h. m.							
1 50	+0.12	32.8	144.3	135.7	30.5	30.092	27.0	18 0	+10.23						
2 0	0.13	33.0	144.1	135.7	31.0	30.089	28.0	20 0	10.21	58.8	143.0	156.7	56.5	29.620	36.2
2 10	0.24	33.5	145.3	135.7	31.5	30.077	28.0	22 0	9.49	57.0	143.1	157.8	57.2	29.640	37.0
2 30	1.11	35.2	145.5	137.1	33.0	30.092	30.0	Dec. 15.							
3 0	0.45	36.5	145.3	136.5	34.0	30.063	32.0	24 0	11.04	59.5	141.9	156.4	60.8	29.646	41.0
3 30	3.11	37.0	144.5	137.5	39.8	30.059	34.0	1 50	10.48	59.5	145.4	159.2	60.0		
4 0	5.41	42.5	142.2	140.5	45.5	30.107	37.0	2 0	10.34	59.2	145.6	159.8	59.5	29.853	37.0
4 30	6.32	46.5	141.3	144.4	52.5	30.108	38.8	2 10	10.26	59.0	146.0	159.4	60.0		
5 0	9.00	51.5	140.5	148.8	58.0	30.070	40.5	4 0	9.30	56.5	144.0	160.0	59.5	29.828	41.5
5 30	10.25	54.5	139.4	150.9	61.8	30.056	39.5	6 0	11.20	61.1	138.5	162.8	67.5	29.856	45.3
6 0	11.00	56.0	138.0	154.2	63.2	30.047	39.3	8 0	13.06	64.5	139.5	162.7	69.0	29.860	47.0
6 30	11.13	57.8	136.5	154.6	63.8	30.023	39.8	10 0	11.41	61.7	141.3	161.2	63.7	29.864	41.2
7 0	11.26	58.3	136.0	155.0	63.6	30.021	39.8	12 0	10.42	58.3	144.7	159.6	57.9	29.898	39.0
7 30	11.31	58.3	136.0	155.2	63.3	30.005	39.3	13 50	9.37	55.5	144.4	156.0	54.8	29.889	39.0
8 0	11.23	58.5	137.7	155.1	62.8	30.031	39.3	14 0	9.37	55.5	144.4	155.6	55.0	29.890	39.0
8 30	11.16	58.5	137.7	154.3	62.5	30.038	38.5	14 10	9.34	55.8	144.4	154.8	55.0	29.891	38.9
9 0	11.05	58.5	139.0	154.5	62.8	30.033	38.5	16 0	10.20	58.0	141.5	155.5	58.0	29.909	40.0
9 30	11.48	59.5	140.0	154.5	61.0	30.013	38.5	18 0	11.32	60.5	141.8	157.7	61.1	29.892	40.3
10 0	11.43	59.0	141.0	155.0	60.0	30.014	37.0	20 0	11.30	60.7	141.8	159.3	61.3	29.899	40.0
10 30	10.25	59.0	141.0	154.3	60.0	30.006	37.6	22 0	12.36	62.3	144.6	159.4	63.3	29.872	39.0
11 0	10.16	57.8	142.7	155.9	59.5	30.006	36.8	Dec. 16.							
11 30	10.11	57.5	142.5	154.8	58.8	29.996	36.0	24 0	12.42	63.0	143.5	159.7	63.8	29.870	39.0
12 0	10.11	57.7	142.3	154.1	58.9	30.000	35.5	1 50	12.13	62.0	146.3	158.5	62.5		
12 30	10.11	57.6	142.5	154.2	58.6	29.998	34.2	2 0	12.16	62.0	145.6	158.1	62.5	29.881	39.0
13 0	10.11	58.0	143.5	153.6	58.4	30.001	33.5	2 10	12.12	62.0	144.0	158.7	62.5		
13 30	10.11	57.1	143.7	153.7	58.0	30.001	32.5	4 0	11.00	60.0	138.5	163.5	59.0	29.888	40.9
14 0	10.08	57.0	143.9	153.7	57.5	30.000	32.5	7 15			135.5	157.0	56.2	29.805	44.0
14 30	9.28	56.5	143.9	153.3	57.0	29.993	31.7	8 0	9.24	56.2	135.5	158.0	55.6	29.794	42.5
15 0	9.18	56.0	143.9	153.3	56.7	29.988	31.4	10 0	8.03	55.2	145.0	154.4	55.3	29.742	42.2
15 30	9.46	56.1	143.4	153.2	56.6	29.998	30.1	12 0	9.23	57.7	143.3	160.0	57.3	29.733	41.0
16 0	9.23	55.5	143.7	153.6	55.5	29.993	30.5	13 50	9.03	57.0	145.0	158.4	56.5	29.721	40.3
16 30	9.28	55.2	143.2	153.6	55.5	29.999	30.3	14 0	9.09	57.0	144.0	158.4	56.3	29.699	39.9
17 0	0.35	55.4	143.4	154.0	56.0	30.021	31.2	14 10	9.13	57.0	145.0	157.9	56.0	29.677	39.5
17 30	9.44	55.6	143.2	154.0	56.0	30.027	33.0	16 0	8.26	54.0	143.7	156.1	53.0	29.647	38.0
18 0	9.09	56.0	145.2	151.9	56.0	30.025	33.4	18 0	9.17	55.3	140.7	153.1	54.6	29.614	37.8
18 30	11.02	56.0	140.3	149.5	56.0	30.017	33.5	20 0	8.32	54.5	141.5	153.8	53.8	29.537	37.0
19 0	11.26	56.0	141.0	155.0	57.0	29.996	33.6	22 0	8.47	54.0	141.0	152.3	53.5	29.491	34.5
19 30	10.37	56.5	143.2	155.6	57.0	29.975	34.5	Dec. 17.							
20 0	10.41	56.8	146.0	153.8	57.4	29.967	35.0	24 0	8.12	52.5	144.5	151.1	52.0	29.439	32.0
20 30	10.45	57.8	144.8	154.1	58.4	29.939	34.3	1 50	7.13	50.3	144.0	152.2	49.0	29.444	32.0
21 0	10.42	58.0	144.5	153.4	58.6	29.927	34.6	2 0	7.13	50.0	139.9	153.5	50.0	29.434	32.0
21 30	10.44	58.1	145.5	154.1	58.6	29.902	35.5	2 10	7.18	50.0	140.0	152.5	50.0	29.432	32.0
22 0	10.40	57.9	144.8	153.4	58.5	29.884	37.0	6 0	5.40	47.3	136.1	152.5	46.8	29.261	32.2
22 30	10.41	57.8	147.0	153.0	58.4	29.836	38.0	8 0	5.04	47.2	136.5	151.0	47.0	29.252	32.2
23 0	10.35	57.7	144.2	153.0	58.1	29.858	38.5	10 0	4.44	44.7	140.5	149.6	44.3	29.213	32.2
23 30	10.31	57.5	143.5	153.4	57.8	29.869	39.0	12 0	4.10	45.5	149.9	151.5	44.3	29.261	34.5
Dec. 14.								13 50	5.17	47.5	143.7	150.5	47.2	29.265	36.3
24 0	10.36	57.7	144.3	153.1	58.0	29.850	39.5	14 0	5.29	47.5	149.0	151.0	47.5	29.255	
0 30	10.35	57.7	144.5	152.8	58.0	29.828	39.5	14 10	6.44	48.0	149.6	150.2	48.0	29.245	33.3
1 0	11.00	58.0	145.4	153.0	58.0	29.837	39.2	16 0	8.07	51.4	149.0	153.2	51.7	29.244	32.0
1 30	11.34	58.0	147.0	155.0	58.0	29.842	40.5	18 0	9.08	53.5	141.4	154.0	53.8	29.187	32.0
2 0	10.31	57.5	145.5	155.3	58.0	29.837	41.5	20 0	10.21	55.0	140.1	153.0	55.2	29.162	32.0
2 10	10.31	57.5	145.4	155.3	58.0	29.830	41.8	22 0	9.34	56.0	140.9	153.9	57.0	29.095	30.3
4 0	11.05	59.8	142.6	152.9	59.0	29.770	43.5	Dec. 18.							
6 0	11.24	60.0	137.3	155.3	60.0	29.641	45.0	24 0	9.17	55.5	142.5	153.2	56.0	29.129	28.5
10 0			140.4				46.2	2 0	7.12	51.0	145.6	153.0	51.0	29.137	27.0
12 0			141.6				46.8	2 10	7.00	50.5	145.6	153.1	51.0	29.137	
13 50	9.42	58.7	143.0	160.2	58.3	29.623	47.5	Dec. 20.							
14 0	10.15	58.7	147.3	162.4	58.1	29.626	46.5	1 50	8.21	24.5	130.5	136.3	22.0		
14 10	10.20	58.7	149.3	162.9	57.9	29.629	45.5	2 0	8.20	24.7	143.1	136.6	22.5	29.970	25.0
16 0	10.30	56.8	140.0	158.6	55.8	29.615	42.0	2 10	8.27	24.9	144.5	135.7	22.5		
								3 30	6.45	29.5	145.3	137.5	28.0	29.978	27.5
								4 0	6.31	31.5	141.1	140.7	30.5	29.974	29.0

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								Dec 27.							
6 0	+4.30	42.0	135.5	148.2	42.0	29.952	32.3	h. m.							
8 0	6.45	48.5	136.5	150.9	50.6	29.956	31.8	1 50			144.5	135.8	19.0		
10 0	6.36	47.8	141.0	150.5	48.0	29.953	28.8	2 0	-5.03	20.6	144.8	134.1	19.5	30.140	18.0
12 0	6.23	47.2	144.5	150.8	47.1		28.9	2 10	5.08	21.0	144.3	135.1			
13 50	6.14	48.0	145.5	146.8	46.5	29.961	27.0	4 0	4.04	24.0	142.7	140.6	31.0	30.169	25.0
14 0	6.30	48.0	145.0	146.8	47.5	29.942	27.0	6 0	2.43	28.1	146.4	138.5	37.3	30.158	28.6
14 10			145.0	147.0	47.0	29.923	27.0	8 0	0.25	34.4	143.5	138.5	36.8	30.126	30.8
16 0	8.42	51.0	143.0	151.8	50.0	30.024	23.0	10 0	0.41	35.7	142.2	141.9	36.6	30.150	27.4
18 0	9.49	52.6	142.0	153.0	52.3	29.982	25.0	12 0	+5.45	48.5	143.0	145.0	44.3	30.143	26.9
20 0	8.42	53.0	141.0	154.6	52.8	30.023	24.7	13 50	5.41	44.2	142.8	147.8	44.5	30.157	24.3
22 0	9.18	53.5	139.6	153.5	53.5	30.033	20.8	14 0	5.38	44.0	142.8	147.9	44.5	30.182	24.2
Dec 21.								14 10	5.34	43.8	143.0	148.1	44.2	30.208	24.1
24 0	9.31	55.5	142.0	154.9	56.0	30.066	18.5	16 0	3.33	42.0	142.5	148.0	41.0	30.129	25.5
1 50	9.01	53.5	144.6	155.0	54.0	30.116	17.0	18 0	4.35	43.0	142.6	147.0	42.1	30.126	26.1
2 0	8.44	53.2	144.8	155.2	53.5	30.115	17.5	20 0	6.48	48.2	142.1	149.2	48.1	30.146	28.0
2 10	8.42	53.0	145.2	155.2	53.5	30.121	17.7	22 0	9.07	53.5	142.0	152.8	51.7	30.120	27.7
3 30	8.39	52.0	145.0	154.9	51.2	30.142	19.0	Dec. 28.							
6 0	5.23	46.1	137.8	154.6	45.4	30.118	18.7	24 0	9.08	52.5	143.9	153.2	50.5	30.133	29.5
8 0	5.49	44.7	139.0	151.7	43.9	30.142	18.0	2 30	7.25	50.0	145.0	153.1	50.2	30.137	32.7
10 0	4.14	42.4	142.2	146.7	42.2	30.209	17.9	4 0	7.48	48.0	142.0	155.0	46.0	30.159	33.0
13 50	4.21	42.1	144.5	147.0	41.4	30.327	12.5	6 0	7.06	49.8	137.8	154.3	48.8	30.051	35.6
14 0	4.19	42.5	143.9	146.9	41.5	30.324		8 0	7.12	50.3	139.0	152.0	49.5	30.058	36.2
14 10	4.25	42.7	143.8	145.5	41.5	30.322	12.4	10 0	7.36	49.5	140.0	153.0	49.0	30.150	32.5
16 0	3.34	40.6	144.0	146.8	40.1	30.365	12.2	12 0	5.06	46.0	142.5	150.7	44.5	30.061	27.7
18 0	3.34	40.3	141.5	145.1	39.7	30.390	9.9	13 50	5.42	45.5	145.2	147.8	43.6	30.078	28.7
20 0	3.40	41.0	139.9	145.1	40.8	30.440	7.4	14 0	5.07	46.0	145.0	147.9	43.7	30.080	28.8
22 0	3.23	39.5	141.5	143.3	39.4	30.475	6.5	14 10	5.09	46.0	144.9	147.9	43.8	30.083	29.0
Dec 22								16 0	6.02	47.3	143.5	148.8	46.1	30.110	27.1
24 0	2.43	38.5	142.5	142.3	37.3	30.556	7.0	18 0	6.19	48.4	142.6	149.7	47.7	30.089	25.9
1 50	3.21	39.3	144.9	142.0	38.0	30.606	8.0	20 0	6.35	47.5	142.0	148.6	45.1	30.124	24.0
2 0	3.18	39.4	145.1	142.2	38.2	30.606	8.0	22 0	7.31	51.4	144.1	150.4	50.2	30.115	24.6
2 10	3.18	39.5	145.6	142.2	38.5	30.605	8.5	Dec. 29.							
8 0	5.33	49.5	132.0	156.9	56.0	30.592	17.8	24 0	7.29	50.5	145.0	149.8	49.5	30.170	26.4
Dec 23.	Term	day	omit	ted.				1 50	6.37	51.5	145.0	150.7	50.9	30.169	27.0
12 0	5.39	48.5	138.8	149.5	47.5	30.417	24.3	2 0	6.41	51.5	145.1	150.4	50.9	30.155	27.0
16 0	7.00	49.5	143.0	149.8	48.0	30.192	33.2	2 10	6.41	51.3	145.8	156.0	50.9	30.142	27.0
18 0	9.05	52.3	140.7	148.8	51.0	30.080	35.2	4 0	8.33	52.0	140.1	156.2		30.182	30.5
20 0	10.18	54.6	140.8	152.3	54.1	29.921	37.8	6 0	8.23	53.0	138.3	157.9	57.1	30.172	37.9
22 0	9.36	55.3	140.5	152.5	54.5	29.750	40.0	8 0	9.16	54.5	139.2	155.0	56.0	30.165	37.8
Dec 24.								10 0	8.31		142.0	153.0	58.9	30.233	35.0
24 0	10.21	56.7	142.0	152.8	56.0	29.621	45.0	12 0	10.47	56.8	143.6	148.8	56.6	30.240	33.1
1 50	11.24	56.7	138.3	153.1	56.0	29.654	48.1	13 30	9.33	50.5	144.2	155.3	55.2	30.310	31.0
2 0	10.07	56.6	138.8	153.2	55.9	29.646		16 0	7.30	49.7	146.2	151.7	48.4	30.287	27.8
2 10			138.2	154.3	55.8	29.638	48.3	18 0	7.35	46.3	143.7	148.4	45.0	30.320	24.0
4 0	10.00	55.8	141.0	155.5	55.0	29.612	49.6	20 0	6.12	47.5	144.8	147.1	45.3	30.337	25.2
6 0	9.26	56.9	135.7	165.5	64.5	29.645	45.8	22 0	7.14	49.2	142.9	147.1	48.4	30.317	25.0
8 0	8.39	51.0	140.3	158.1	58.2	29.778	38.0	Dec 30.							
10 0	7.48	52.8	140.3	156.3	53.2	29.833	33.2	24 0	8.00	51.0	146.2	146.8	50.1	30.292	26.0
12 0	6.28	50.2	147.4	152.4	50.0	29.885	30.7	1 50	8.48	52.6	137.1	153.7	53.0		
13 50	6.35	50.0	142.8	153.6	48.9	29.880	29.7	2 0	8.41	52.6	134.1	156.0		30.257	29.5
14 0	6.35	50.0	144.5	151.3	48.9			2 10	8.48	52.6	132.3	156.8	53.0		
14 10	6.38	50.0	144.5	150.8	48.9	29.880	29.8	4 0	9.34	50.7	135.5	151.4	50.4	30.095	33.0
16 0	6.34	49.7	145.3	152.8	48.1	29.950	28.6	6 0	7.03	49.5	121.5	159.6	48.8	30.043	37.0
18 0	6.31	50.3	142.5	151.0	49.1	29.941	28.7	8 0	4.32	49.6	127.2	160.0	48.8	29.999	37.0
20 0	7.31	51.5	140.8	153.0	50.5	29.936	28.9	10 0	6.25	49.0	135.5	138.0	48.0	29.971	32.0
22 0	7.35	51.0	135.4	154.3	50.9	29.941	30.0	12 0	3.40	48.6	140.5	162.2	47.8	29.957	30.7
Dec 25.								13 50	6.29	51.0	143.5	158.5	50.3	29.896	30.8
24 0	7.20	51.0	142.0	151.6	50.8	29.963	29.2	14 0	6.29		145.0	159.6	50.3	29.861	30.9
1 50	7.29	51.2	144.3	152.2	51.2	29.967	30.0	14 10	6.40	50.9		158.3	50.4	29.826	31.0
2 0	7.17	51.3	145.0	152.6	51.3	29.970		16 0	8.01	52.0	145.5	157.0	52.3	29.851	31.0
2 10			145.0	152.6	51.2	29.972	30.7	18 0	8.38	53.2	142.4	158.4	53.2	29.800	32.2
								20 0	9.46	54.5	141.8	159.0	54.8	29.827	28.0
								22 0	10.09	55.1	144.8	158.1	55.0	29.835	27.5

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
Dec. 31.								h. m.							
24 0	+8.39	53.0	139.0	156.3	53.0	29.854	24.0	16 0	-2.42	25.0	143.2	151.9	44.0	30.459	5.8
1 50	7.44	51.5	141.5	157.1	50.6	29.864	25.2	18 0	3.15	23.0	142.3	149.1	43.7	30.473	7.2
2 0	7.36	51.5	142.2	156.9	50.6	29.860	26.2	20 0	4.23	21.2	142.1	150.7	48.1	30.524	6.0
2 10	6.28	51.5	143.0	156.5	50.6	29.857	27.2	21 0	5.39	20.0	141.4	151.3	48.4	30.506	6.0
4 0	9.18	55.0	143.2	161.3	59.0	29.825	35.5	22 0	4.48	29.8	142.2	151.4	47.6	30.522	3.7
6 0	10.24	58.2	139.2	171.1	68.4	29.715	39.7	Jan. 6.							
8 0	11.07	58.6	139.6	163.8	62.0	29.688	38.0	24 0	6.06	18.0	143.0	150.6	46.3	30.541	2.8
10 0	8.42	55.9	144.8	163.5	57.3	29.666	36.5	1 50	6.25	17.0	145.5	151.4	46.0	30.556	4.2
12 0	8.23	53.2	143.9	155.6	53.4	29.664	33.7	2 0	6.37	17.0	145.2	152.4	46.0	30.556	5.0
13 50	9.38	54.4	144.0	157.0	54.0	29.642	32.4	2 10	6.37	17.0	146.1	152.2	46.0	30.545	5.2
14 0	9.43	54.5	144.0	156.6	54.0	29.652	32.5	4 0	5.37	18.0	141.8	156.3	51.6	30.538	14.9
14 10	9.46	54.5	143.5	156.7	54.0	29.662	33.0	6 0	4.09	22.9	135.7	159.1	54.7	30.405	21.7
16 0	8.22	52.0	144.0	155.3	51.5	29.761	32.5	8 0	2.17	25.8	135.3	153.6	50.2	30.351	25.4
18 0	7.05	54.0	143.5	155.5	51.0	29.761	27.0	10 0	2.18	26.6	138.7	150.6	51.9	30.334	25.0
20 0	8.42	53.0	143.5	155.5		29.750	21.0	12 0	2.20	27.0	138.5	152.2	52.0	30.220	26.0
22 0	9.40	50.0	144.8	155.0	52.0	29.742	17.0	16 0			147.2	149.0	46.8	29.871	32.6
Jan. 1, 1842.								18 0	0.27	29.8	144.5	151.3	49.0	29.764	34.3
24 0	8.33	48.0	143.0	153.0	53.0	29.853	16.0	20 0	+0.30	32.5	141.5	155.3	53.5	29.594	42.5
1 50	6.42	45.6	133.3	150.8	44.2			22 0	2.01	35.2	138.7	156.5	55.2	29.512	43.2
2 0	6.41	45.5	132.9	150.7	44.2			Jan. 7.							
2 10	6.32	45.2	140.4	159.2	44.0	30.124	16.5	24 0			144.4	157.0	57.5	29.455	44.3
Jan. 3.								1 50	2.41	39.0	143.0	159.7	57.0		
1 50	-1.47	26.5	145.9	135.5	24.5	29.789	7.3	2 0	2.45	39.0	143.2	159.3	57.0	29.464	42.7
2 0			146.0	135.6	25.0	29.783	8.0	2 10	2.45	39.1	143.3	159.2	57.0	29.478	42.6
2 10			145.9	136.0	25.0	29.787	8.0	4 0	3.11	40.5	139.5	159.5	55.0	29.461	43.0
4 0			140.5	147.5	42.5	29.834	11.5	6 0	3.30	41.3	137.4	160.0	53.7	29.439	44.2
6 0	0.19	31.7	135.0	161.2	64.0	29.851	14.0	8 0	3.46	42.2	135.0	154.2	54.0	29.503	45.0
10 0	1.19	29.0	139.3	154.6	46.5	29.973	13.2	10 0	3.23	42.0	139.3	156.6	56.0	29.584	42.5
12 0	2.31	26.6	139.8	149.0	49.8	29.998	13.0	12 0	3.38	41.5	141.1	154.9	55.0	29.670	39.7
13 50	4.48	24.0	139.1	152.2	49.8	30.019	12.5	18 0			142.1	155.0	52.3	29.937	30.9
14 0	4.36	24.0	139.6	152.2	49.8	30.035	12.6	20 50	1.26		141.5	153.1	51.8	30.009	26.2
14 10	3.20	24.0	140.9	152.6	49.8	30.052	12.8	22 0	0.01	34.1	141.9	153.1	51.5	30.046	24.0
16 0	4.35	22.5	140.5	152.5	48.4	30.019	12.1	Jan. 8.							
18 0	4.40	22.3	138.1	150.8	48.5	30.021	13.9	0 20			143.2	153.2	51.1	30.132	20.8
20 0	4.20	23.0	141.0	151.9	50.0	29.978	15.8	0 45	-0.27	31.4	145.0	153.8	50.1	30.152	20.4
22 0	4.09	23.1	141.8	152.1	50.7	29.857	17.0	1 50	0.18	30.5	146.0	154.5	48.0	30.170	21.0
Jan. 4								2 0	0.23	30.5	146.1	154.6	48.0	30.188	21.5
24 0	4.02	23.4	142.9	152.0	49.6	29.852	17.5	2 10	0.25	30.2	146.0	154.4	47.2	30.184	22.0
1 50	3.23	23.3	140.7	152.3	47.0	29.716	22.0	Jan. 10.							
2 0	3.22	23.5	141.9	152.1	47.0	29.705	22.0	1 50	0.48	34.0	144.3	141.7	32.2	30.188	
2 10	3.25	23.6	143.1	152.5	47.0	29.714	22.5	2 0	+1.00	34.0	144.7	141.5	32.2	30.182	33.0
4 0	2.27	25.5	139.5	153.0	45.0	29.648	25.5	2 10	1.02	34.2	144.8	141.6	32.2	30.180	33.0
6 0	1.33	29.3	136.3	152.2	48.0	29.546	28.6	4 0	1.20	34.5	139.5	142.7	32.8	30.192	35.0
8 25	0.37	32.3	138.0	153.4	55.0	29.587	28.0	6 0	1.36	35.8	134.0	141.4	34.2	30.132	38.2
10 0	+0.27	32.3	140.4	152.6	54.0	29.651	23.4	8 0	2.02	36.5	138.0	140.3	41.8	30.120	35.0
12 0	1.21	30.5	142.1	152.0	50.5	29.663	18.1	10 0	2.09	37.3	141.0	145.6	49.6	30.130	34.7
13 50	1.32	29.2	143.2	153.0	48.5	29.710	18.0	12 0			140.0	149.6	49.9	30.170	32.7
14 0	1.38	29.2	143.1	152.8	48.5	29.711	18.0	13 50	3.24	40.1	141.9	151.9	53.5	30.154	31.4
14 10	1.42	29.5	142.8	152.6	48.5	29.712	18.0	14 0	3.20	40.0	141.4	152.0	53.8	30.149	
16 0	-1.22	30.5	151.5	153.3	45.0	29.703	17.5	14 10	3.18	40.0	141.8	152.2	54.0	30.145	31.0
18 0	1.42	29.6	140.4	148.9	46.1	29.699	19.4	16 0	3.26	39.0	140.1	155.9	54.6	30.124	30.8
20 0	1.40	30.0	143.2	151.5	50.5	29.741	17.0	18 0	3.08	38.5	146.0	158.8	55.0	30.165	30.6
22 0	1.32	29.3	139.0	151.3	50.6	29.732	18.2	20 0	2.37	37.8	146.0	159.0	56.0	30.149	30.0
Jan. 5.								22 0	2.00	37.0	144.0	156.8	55.9	30.135	28.7
24 0	1.32		143.4	154.1	54.5	29.817	24.0	Jan. 11.							
2 0			147.2	154.1	50.0	30.090	20.0	24 0	2.21	36.5	142.4	155.6	56.0	30.122	27.5
4 0	1.09	28.5	139.2	160.1	59.6	30.124	24.0	2 0	1.29	35.2	148.4	153.4	54.2	30.141	27.0
6 0	0.42	31.7	135.8	167.0	70.6	30.120	23.7	4 0	1.31	35.5	139.7	159.0	50.5	30.077	30.0
8 0	+0.31	32.9	138.2	158.1	58.0	30.259	20.0	6 0	2.05	36.2	134.9	155.2	51.6	30.000	34.0
10 0	0.33	31.4	139.0	157.2	54.8	30.319	17.0	Jan. 12							
12 0	-2.04	29.2	161.6	158.9	51.5	30.386	12.9	1 50	0.05	31.4	143.0	143.6	29.5	29.641	27.0
14 0	2.45	27.1	144.0	151.8	49.9	30.459	12.3	2 0	0.08	31.3	143.5	143.4	29.8	29.637	
								2 10	0.12	31.2	148.0	142.7	30.0	29.600	27.3

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
4 0	-0.26	32.5	139.5	148.2	42.8	29.586	34.0	13 50	+10.14	53.0	144.4	163.8	61.0	29.678	43.0
6 0	+2.32	37.2	135.1	150.1	47.2	29.556	35.5	14 0	10.18	53.0	144.4	163.4	60.1	29.676	43.0
8 0	2.21	37.5	137.8	150.4	50.8	29.561	35.1	14 10	10.13	53.0	144.6	163.8	60.1	29.674	43.1
10 0	2.06	37.0	140.1	150.6	50.0	29.566	33.0	16 0			142.7	160.0	57.6	29.608	44.4
12 0	1.39	36.0	140.0	152.8	49.9	29.604	28.8	18 0			141.6	158.8	57.5	29.560	45.4
16 0			141.8	154.0	49.6	29.609	30.4	20 0			142.3	159.1	57.5	29.496	46.4
18 0	1.15	34.5	139.8	151.6	49.1	29.623	30.0	22 0	8.25	48.5	143.1	158.8	57.0	29.395	50.9
20 0	1.02	34.5	140.0	153.0	55.0	29.743	22.5	Jan. 21.							
22 0	0.20	32.2	140.3	155.4	56.4	29.769	18.7	24 0	8.30	49.4	143.4	159.9	60.8	29.350	51.5
Jan. 13.								1 50	9.13	50.2	144.0	162.0	60.4	29.299	50.4
24 0	-0.42	29.0	142.3	155.8	45.3	29.918	10.0	2 0	9.22	50.7	144.2	161.3	60.2	29.299	50.7
1 50	2.42	24.5	143.0	149.9	40.5	30.046	4.0	2 10	9.25	50.7	144.2	161.1	60.2	29.299	50.9
2 0	2.37	25.2	143.4	149.6	40.2	30.055	4.0	Jan. 22.							
2 10	2.17	24.0	142.7	150.2	40.0	30.059	4.0	1 50	0.48	31.5	143.9	144.2	30.1	29.619	28.0
Jan. 14.								2 0	1.07	31.5	143.8	144.8	30.1		
1 50	6.00	14.0	144.0	135.3	20.0	29.986	14.8	2 10	1.09	31.5	145.2	145.3	30.1	29.619	27.2
2 0	5.47	14.1	143.9	135.8	19.9			Jan. 24.							
2 10	5.47	14.3	143.7	135.8	19.8	29.981	16.1	1 50	-7.16	7.8	146.3	133.1	17.8	30.559	0.8
4 0	4.20	17.8	139.0	144.0	35.5	29.914	33.2	2 0	7.10	8.0	145.0	133.9	18.8	30.557	
6 0	1.36	25.0	134.0	150.8	47.1	29.714	39.9	2 10	7.10	8.1	144.5	134.8	20.0	30.567	1.8
8 0	+0.41	30.5	137.8	150.3	51.0	29.603	42.0	4 0	5.19	10.8	139.0	157.7	49.0	30.551	8.2
10 0	2.23	34.5	140.0	149.8	49.6	29.564	41.7	6 0			135.6	154.8	47.3	30.493	13.7
12 0	3.00	36.5	141.4	152.2	51.0	29.538	40.5	8 0	0.00		137.3	157.2	53.5	30.455	17.8
13 50	3.46	38.5	142.7	151.5	50.8	29.525	39.6	10 0	+0.13	27.5	134.7	163.1	53.8	30.425	18.0
14 0	4.02	38.5	143.9	152.0	51.0	29.524	39.4	12 0	-1.26	25.5	135.7	158.8	51.2	30.390	
14 10	4.35	38.8	145.6	152.1	51.2	29.524	39.3	13 50	1.14	25.0	139.0	158.4	52.8	30.359	12.2
16 0	4.05	38.8	141.8	153.3	55.0	29.525	38.3	14 0	1.04	25.0	139.4	158.7	52.8	30.350	12.1
18 0	4.11	38.7	140.4	156.1	58.0	29.537	36.9	14 10	0.46	24.8	139.1	158.7	52.6	30.342	12.0
20 0	3.44	38.5	140.1	156.3	58.3	29.562	34.0	16 0	1.31	23.0	140.0	160.8	52.0	30.292	13.0
22 0	3.21	37.4	141.6	156.4	55.9	29.565	32.5	20 40	2.09	22.0	144.0	159.7	46.0	30.127	17.0
Jan. 15.								22 0	1.43	22.0	142.1	156.3	46.0	30.101	21.9
24 0	3.02	36.3	142.8	154.6	56.1	29.570	31.0	Jan. 25.							
Jan. 17.								24 0	0.44	23.5	144.0	157.9	50.5	30.051	24.0
1 50	-4.10	18.2	146.0	135.0	17.0	29.965	17.0	2 0	0.40	24.7	145.0	159.1	52.1	30.047	26.3
2 0	3.49	18.3	147.5	135.6	17.0	29.967		2 10			145.2	159.7	52.0	30.033	27.1
2 10	4.02	18.3	147.4	135.4	17.0	29.965		Jan. 26.							
4 0	2.47	21.1	142.9	144.1	36.7	29.980	33.9	1 50	+1.12	28.4	142.7	146.6	32.0	29.715	27.1
6 0	+0.13	28.2	134.4	156.9	52.1	29.901	38.0	2 0	1.13	28.5	143.0	146.7	32.6	29.706	28.2
8 0	1.39	33.0	135.1	154.5	51.6	29.837	39.0	2 10	1.15	28.6	143.4	146.8	33.2	29.698	28.4
10 0	2.01	34.2	139.7	152.7	54.4	29.840	38.0	4 0	2.09	30.8	140.7	161.8	57.0	29.761	40.0
12 0	2.20	35.0	141.7	154.1	54.8	29.852	36.1	6 0	5.42	36.8	138.0	173.6	71.2	29.680	47.5
13 50	2.28	35.5	143.1	156.1	57.0	29.855	37.5	8 0	8.45	42.0	137.0	173.0	69.0	29.607	43.8
14 0	2.31	35.7	142.0	156.1	57.2	29.845	37.5	10 0	8.40	47.5	139.6	169.1	67.0	29.608	42.9
14 10	2.38	36.0	141.6	156.2	57.6	29.835	37.4	12 0	8.15	46.5	140.1	168.5	63.0	29.579	37.8
16 0	3.09	36.5	144.7	157.8	57.3	29.831	35.3	13 50	7.16	44.1	140.2	166.8	61.0	29.533	33.7
18 0	3.04	36.5	140.1	156.2	56.3	29.794	36.3	14 0	7.15	44.0	140.3	166.8	61.0	29.536	33.2
20 0	3.15	36.5	140.0	154.1	57.8	29.848	34.5	14 10	7.04	44.0	140.3	167.0	60.8	29.540	32.7
22 0	3.05	36.0	141.1	156.8	58.5	29.864	34.5	16 0	6.40	41.5	140.2	166.0	58.5	29.479	31.3
Jan. 18.								18 0	5.44	39.5	140.2	164.0	58.6	29.386	28.8
24 0	2.44	35.5	142.9	150.3	56.8	29.892	30.5	20 0	5.18	38.5	140.3	163.8	58.8	29.325	32.0
1 50	2.08	34.6	147.0	155.0	55.0	29.953	32.6	22 0	5.09	38.1	140.6	164.2	60.2	29.266	32.8
2 0	2.15	34.5	148.1	154.8	55.0	29.960	33.1	Jan. 27.							
2 10	2.20	34.6	147.7	154.8	55.0	29.968	33.6	24 0	5.05	37.5	143.0	165.5	58.0	29.249	29.2
Jan. 19.								1 50	4.32	36.3	146.6	162.9	54.2	29.274	32.4
1 50	2.00	33.7	146.9	145.4	33.9	29.930	35.8	2 0	4.29	36.4	147.1	163.1	54.0	29.284	32.4
2 0	2.12	34.0	147.1	145.6	34.0	29.920	36.5	2 10	4.31	36.5	146.9	163.3	53.8	29.294	32.4
2 10	2.21	34.0	146.4	146.2	34.0	29.931	37.3	Jan. 28.							
4 0	3.03	35.5	141.1	154.6	45.8	29.903	44.8	1 50	-2.14	19.0	145.0	139.7	18.2	30.280	18.0
6 0	5.25	41.4	133.6	166.3	70.6	29.840	52.8	2 0	2.25	19.1	145.4	138.5	18.7	30.280	19.0
8 0	8.01	48.5	135.7	167.3	67.1	29.799	57.0	2 10	2.28	19.2	145.7	139.6	18.8	30.280	20.0
Jan. 20.								4 0	1.10	22.0	143.4	149.4	39.2	30.292	30.8
12 0	10.46	56.0	141.7	165.7	64.0	29.685	45.1	6 0	+2.19	30.7	138.3	159.7	52.5	30.212	36.0
								8 0	4.43	36.5	136.0	163.0	56.0	30.118	36.3

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	
h. m.								h. m.								
10 0	+4.16	36.0	139 2	159.9	55.0	30 109	33.8	12 0	+11.42	54.5	139.0	170.0	65.0	29.529	48.0	
12 0	4 23	36.5	137.9	163.5	56.0	30 043	32.0	13 50	10.28	53.5	140.8	171.0	64.5	29.479	45.0	
13 50	4.02	35.7	151.4	164.6	56.8	30.007	32.1	14 0	10.36	53.3	141 0	171.3	64.6	29.493	44.8	
14 0	4.10	35.8	148 8	164.1	56.4	30.015	32.3	14 10	10.30	53.3	142.0	170.9	64 8	29.475	44.7	
14 10	4.19	35.9	146.9	164 9	56.1	30.023	32.5	16 0	10.13	52.5	141.8	170.4	65.8	29 385	44.6	
16 0	4.18	36.0	142.2	164 3	55.8	29.986	35.8	18 0	10.37	52 2	141.6	172.1	66.8	29.306	43.6	
18 0	4.46	37.0	140.7	162 2	53.0	29.929	37.5	20 0	10.15	51.2	141.3	172 2	63.8	29.241	42.6	
22 0	5.25	38.1	141.5	162.5	56.8	29.879	41.4	22 0	10.00	51.3	142.2	169.7	64.1	29.146	43.1	
Jan. 29.								Feb. 5.								
24 0			138 8	161.4	58.0	29.802	41.0	24 0	9.45	50 6	141.2	169.7	65.0	29.106	42.4	
1 50	5.43	39.5	144.3	160 1	56 0	29.771	45.7	1 50	9.47	50 0	145.6	170.8	62.3	29.067	43.2	
2 0	6.00	39.6	145.0	160.4	56 0	29.773	45.8	2 0	10.01	50.0	145.4	170.5	62.2	29.072	43.6	
2 10	6.09	39.8	145.6	160.9	55.8	29.775	46.0	2 10	9.31	50.0	145.4	170.5	62.0	29.077	44.0	
Jan. 31.								Feb. 7.								
1 50	5.35	38.4	145.8	157.1	34.9	29.841	36.0	1 50	6 01	40.8	142 4	157.9	39.0	29.646	39.8	
2 0			147.2	150.9	35.0			2 0	6.05	40.9	137.7	161.7	39.0	29.630	40.1	
2 10			146.4	150.0	35 0	29.844	37.0	2 10	6.14	40.9	133.9	164.5	39.0	29.621	40.5	
4 0	6.16	38.7	141.3	157 4	45.8	29.794	46 9	4 0	7.14	42.4	128.1	160.8	47.0	29 600	50.0	
6 0	6.22	41.5	136.1	165.4	58.5	29.657	51.1	6 0	8.12	44.4	133.8	164.5	56.3	29.558	52.1	
8 0	6.45	43.2	136 9	164 4	61.2	29.523	51.5	8 0	6.27	45.5	137 6	167.5	58.8	29 523	50.2	
10 0	7.36	44.3	140 7	165 5	61.3	29.496	49.7	10 0	6.38	45.5	147.5	170.5	60.5	29.489	46.5	
12 0	8.10	45.0	142.2	165.0	62.2	29.447	51 6	12 0	6.15	45.5	138 8	171.0	65.0	29.420	45.0	
13 50	8.22	46.0	141.3	166.4	62.3	29.422	52 8	13 50	6.18	45 2	140.4	171.4	63.4	29.434	44.2	
14 0	8.19	46.0	141 6	166.4	62.3	29.425	52.5	14 0	6.23	45.2	140.4	170.8	63.2	29.429	43.9	
14 10	8.10	46.5	142.0	166.7	62.2	29.420	52.3	14 10	6.44	45.3	141.5	171.8	63.0	29 424	43.7	
16 0	8.09	46 5	144.1	168.4	62.0	29 491	46.0	16 0	7.10	44.6	140.4	169.4	62.0	29 430	37.0	
18 0	9.06	45.7	146 3	169.1	60.7	29 543	42.5	18 0	7.00	43.6	141.0	169.3	60.2	29.422	33.8	
20 0	8.16	45.2	137.9	165.0	60.0	29.598	37.3	20 0	7.07	42.6	141.6	168.3	60.0	29.404	34.0	
22 0	7.16	44.0	135.9	166.0	59.8	29.684	34.0	22 0	6.48	42.3	142.3	166.7	60.5	29 390	33.5	
Feb. 1.								Feb. 8.								
24 0	6.46	42.5	146.5	166.0	59.0	29.774	31.7	24 0	6.22	46.5	141.9	166.5	59.5	29 409	32.0	
1 50	6.00	41.0	142.7	166.6	57.0	29.853	33.5	1 50	5.45	41.0	145.6	166.4	57.0	29 405	32.0	
2 0	6.10	40.5	144.6	166.0	57.0		34.5	2 0	5.46	41.0	146 1	166 2	57.0	29.407	32.0	
2 10	6.14	40.5	145.5	167.0	57.0	29.869	35.0	2 10	5.48	41.0	145.6	166.9	56.7	29.410	32.0	
Feb. 2.								Feb. 9.								
1 50	3 04	33 0	146.1	151.9	31.0	30.304	25.2	1 50	-1.19	23.2	147.9	144 1	15.0	30.011	4.9	
2 0	3.02	33.0	145.8	148.2	31.2	30.298	26.3	2 0	1.14	23.1	147.8	141.0	15.1	30.013	5.6	
2 10	2.49	33.0	145.4	148.3	31.3	30.292	27.4	2 10	1.17	23.1	148.3	138.7	15.2	30.016	6.3	
4 0	3.40	35.0	139 4	158.2	43.6	30.304	39.6	4 0	1.15	23.3	145.3	146.5	31.1	30 072	11.3	
6 0	4.26	38.3	134 3	166.5	56.3	30.149	43.9	6 0	0.09	26.6	139.8	159.9	48.4	30.070	17.1	
8 0	5.15	41.0	134 4	167.7	59.6	30.134	42.2	8 0	+1.19	30.0	141.0	162.6	53.0	30.049	20.1	
10 0	5.22	41.2	140.5	163.5	57.2	30.096	41.6	10 0	1.42	31.0	142.7	163.1	55.9	30 033	21.1	
12 0	5.32	41.4	140.5	162.7	55 7	30.058	38.0	12 0	1.12	30.0	142.3	161.5	52.0	30.044	18.2	
13 50	5.11	40.5	140.3	163.7	55.6	30.042	40.6	13 50				161.2	52.8	30 000	19.8	
14 0	5.18	40.5	140.7	163.9	55.3	30.040	40.8	14 0				141.5	161.5	53.0	30 006	20.0
14 10	5.28	40 6	141.1	163.8	55.3	30.039	41.0	14 10				141.5	161 6	53.0	30.013	20.3
16 0	5.49	41.0	142.5	163.8	56.4	30.009	43.2	16 0	2.03	29.0	141.0	156.3	46.1	29.992	22.2	
18 0	6.03	41.5	141.3	167.1	60.7	29.956	43.8	18 0	1.15	29.1	142.7	164.1	59.2	29.970	26.0	
20 0	6.15	41 6	139.8	169.2	62.8	29.917	44.7	20 0				143.1	168.1	62 0	29.949	28.1
22 0	6.32	42.6	143.0	168.4	63.4	29.866	49.0	22 0	2.01	30.6	143.5	167.8	57.2	29.955	27.6	
Feb. 3.								Feb. 10.								
24 0	6.43	43.5	143.2	168.4	63.0	29.821	49.3	24 0	2.09	30.7	143.6	163 9	56.5	29.941	27.6	
1 50	7.13	44 6	141.5	168 8	63.8	29.787	51.9	1 50	2.24	31.4	145.5	165.8	59.8	29.997	31.0	
2 0			141.7	169.0	63.8	29.751	52.3	2 0				146.0	165.6	59.8		
2 10			141.6	168.6	63.8	29.767	52.8	2 10				146.5	165.7	59.7	29 998	32.4
Feb. 4.								Feb. 11.								
1 50	12.03	55 8	145.1	168.9	60.4	29.462	60.2	1 50	1.04	29.0	139.8	150.3	29.0	30 195	24.0	
2 0	12.02	55.8	145.2	169.0	60.4	29 470	60.1	2 0	1.08	29.2	144.1	150.9	30.0	30.194	25.0	
2 10	12.02	55.8	145.3	168.6		29.459	60.0	2 10	1.24	29.2	143.7	147.9	30.2	30.192	26.0	
4 0	12.15	51 0	140.0	169.9	61.3	29 576	53.0	4 0	2.29	31.0	143.5	154.9	46.0	30.171	38.0	
6 0	12.45	55.7	133.4	171.8	63.5	29.579	57.2	6 0	4.23	36.0	134.6	171.4	66.5	30.130	48.2	
8 0	11.31	55.7	136.5	169.5	62.0	29 563	52.5	8 0	6.13	41.0	131.0	173.1	69.0	30.073	50.2	
10 0	11.07	55.0	138.3	167.0	64.0	29.541	48.9	10 0	5.44	43.0	127.1	175.5	67.2	30.052	47.4	

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
12 0	+4.18	42.8	138.4	179.3	64.3	30.010	40.8	12 0	+1.26	33.1	156.2	167.3	54.2	30.104	34.4
13 50	4.00	42.0	144.0	181.0	65.5	29.986	39.8	13 50	2.00	33.1	139.2	166.0	54.1	30.065	34.5
14 0	4.00	42.0	143.7	180.9	66.0	29.978	39.3	14 0	2.01	33.1	138.3	165.9	53.2	30.055	38.2
14 10	4.04	42.0	145.1	180.9	66.0	29.969	39.0	14 10	2.09	33.3	139.0	165.8	53.2	30.045	37.0
16 0	5.22	42.0	149.3	182.0	65.5	29.913	39.5	16 0	3.31	34.5	141.2	166.8	59.1	29.979	39.8
18 0	8.13	42.3	149.8	187.4	67.1	29.848	42.8	18 0	4.14	35.6	142.2	168.3	58.4	29.910	42.7
20 0	8.13	42.5	142.4	185.0	66.0	29.755	42.5	20 0	5.10	37.0	141.0	170.7	64.5	29.815	45.0
22 0	8.23	42.5	135.2	178.4	63.5	29.698	42.2	22 0	6.17	38.5	130.6	174.2	64.6	29.759	44.6
Feb. 12.								Feb. 19.							
24 0	7.21	42.8	145.6	172.3	66.0	29.686	45.5	24 0	6.28	40.0	142.0	172.7	66.5	29.611	48.0
1 50	6.25	43.0	152.0	172.3	66.0	29.703	47.0	1 50	6.42	41.5	135.0	176.0	66.0	29.525	50.0
2 0	6.30	43.0	151.9	171.7	66.3	29.693	47.0	2 0	7.05	41.5	131.3	176.6	65.5	29.503	50.0
2 10	6.32	43.0	151.1	172.0	66.5	29.683	46.8	2 10	7.11	43.7	128.6	176.4	65.3	29.482	49.5
Feb. 14.								Feb. 21.							
1 50	5.08	38.5	145.1	149.7	37.4	29.380	39.7	1 50	1.05	25.8	144.5	145.1	24.5	30.069	21.2
2 0	5.12	38.5	144.8	149.8	37.6	29.383	40.0	2 0	0.35	25.8	144.5	145.2	25.0		21.6
2 10	5.22	38.7	145.3	149.9	37.9	29.386	40.2	2 10	0.39	25.9	144.9	145.4	25.3	30.069	22.1
4 0	6.31	40.5	145.5	155.9	49.7	29.381	46.7	4 0	2.10	29.1	143.9	159.6	53.2	30.046	27.7
6 0	7.35	43.5	139.6	166.9	63.8	29.333	48.2	6 0	4.24	33.9	140.3	167.8	63.9	30.018	31.1
8 0	8.35	46.0	132.2	171.7	67.1	29.294	48.3	8 0	5.24	37.6	138.9	168.1	64.6	30.001	32.9
10 0	8.01	47.5	134.5	171.8	62.7	29.340	42.3	10 0	5.45	39.2	137.9	171.0	64.0	30.010	31.4
12 0	7.10	44.7	140.1	169.4	58.2	29.452	31.4	12 0			139.4	170.0	57.8	30.034	26.7
13 50	6.21	42.1	143.4	166.1	55.6	29.505	27.1	13 50			140.5	164.4	55.0	30.046	23.8
14 0	6.25	41.8	143.6	165.9	55.3	29.517	26.5	14 0			140.9	164.0	55.0		
14 10	6.16	41.5	143.9	167.3	55.1	29.518	26.0	14 10			140.9	163.7	54.9	30.053	23.2
16 0	5.20	39.4	143.9	165.1	53.9	29.572	23.0	16 0	3.49	34.5	144.9	164.3	55.8	30.043	21.2
18 0	4.33	37.1	142.7	164.3	52.6	29.656	19.2	18 0	3.07	33.0	141.8	163.7	55.9	30.069	18.5
20 0	3.38	29.5	144.7	163.7	52.0	29.754	12.0	20 0	3.31	21.0	143.8	166.8	60.2	30.020	18.2
22 0	3.08	33.6	143.1	161.3	49.4	29.835	8.1	22 10			141.7	166.9	61.0	30.018	18.1
Feb. 15.								Feb. 22.							
24 0	2.05	30.1	143.6	159.3	49.9	29.889	9.0	24 0	2.21	29.8	144.2	168.0	57.0	29.991	17.5
1 50	1.15	28.4	146.9	160.8	50.8	29.949	10.8	1 50	2.27	30.6	144.3	163.2	51.5	30.013	20.4
2 0	1.09	28.4	146.1	160.7	50.8	29.966	11.3	2 0	2.38	30.6	143.9	163.9	51.0		
2 10	1.15	28.3	145.6	160.4	50.9	29.984	11.8	2 10	2.34	30.7	143.6	163.6		30.005	21.0
Feb. 16.								Feb. 23.							
1 50	-0.03	25.0	147.3	142.2	23.8	29.959	26.8	1 50	1.34	28.0	144.7	147.7	24.9	30.054	21.1
2 0	+0.01	25.2	147.2	143.9	23.9	29.924	27.5	2 0	1.31	28.1	144.6	147.9	24.9		
2 10	0.10	25.4	147.9	144.4	24.0	29.889	28.2	2 10	1.37	28.0	143.9	147.3	25.0	30.048	22.9
4 0	1.02	27.4	145.1	151.5	39.0	29.802	39.5	4 0	3.06	30.3	143.1	153.8	42.8	30.051	29.3
6 0	2.30	30.5	138.9	162.0	51.3	29.666	38.0	6 0	5.28	35.2	138.2	164.5	61.7	30.027	35.8
8 0	2.37	32.0	137.2	161.3	60.0	29.465	39.0	8 0	6.16	39.0	138.3	167.8	64.9	29.979	37.8
10 0	3.18	33.7	135.2	163.1	57.1	29.266	38.3	10 0	6.36	40.4	139.3	166.8	60.8	29.970	35.5
12 0	4.25	35.3	141.3	162.0	57.0	29.053	40.0	12 0	5.42	38.8	139.6	166.0	59.4	29.982	28.8
13 50	2.08	36.9	138.9	176.8	58.3	28.801	42.0	13 50	4.44	37.2	140.6	165.8	56.7	29.991	27.0
14 0	1.18	37.0	144.5	179.8	58.0	28.861	42.0	14 0	4.33	37.3	140.4	165.8	57.0		
14 10	1.05	37.2	143.8	180.1	58.0	28.746	43.2	14 10	4.40	37.1	140.7	165.9	57.1	30.000	26.6
16 0	2.30	39.0	143.6	173.0	66.2	28.497	47.0	16 0	5.15	36.1	145.1	167.5	55.5	30.005	28.2
18 0	3.32	40.0	144.0	174.1	60.7	28.373	41.6	18 0	4.27	35.6	143.0	163.8	55.1	30.007	30.1
20 0	4.10	39.0	145.6	169.0	53.0	28.521	32.0	20 0	4.28	35.7	146.0	166.8	58.2	29.991	30.3
22 0	3.25	34.5	144.8	160.6	42.6	28.682	24.4	22 0	4.26	35.6	147.5	164.9	59.7	30.003	29.5
Feb. 17.								Feb. 24.							
24 0	3.12	31.2	143.0	155.7	35.0	28.844		24 0	7.07	35.7	149.4	166.8	60.6	30.013	30.2
1 50	4.06	29.2	134.6	147.1	30.3	28.952	21.0	1 50	6.23	36.3	148.3	163.9	58.9	30.038	33.2
2 0	3.43	29.2	135.7	146.0	30.0	28.967	20.0	2 0	6.26	36.5	148.8	162.7	59.4	30.040	37.3
2 10	3.42	29.1	137.5	146.0	30.0	28.982	20.8	2 10	6.36	36.5	147.4	163.5	60.0	30.041	34.4
Feb. 18.								Feb. 25.							
1 50	-0.20	21.7	145.7	143.4	16.2	30.235	22.0	1 50	2.40	32.4	143.1	155.9	39.6	30.472	23.0
2 0	0.06	21.9	141.1	144.3	17.0	30.235	23.2	2 0	2.38	32.4	143.3	156.3	40.6	30.482	23.9
2 10	0.03	22.0	139.2	142.4	17.6	30.234	24.3	2 10	2.43	32.5	143.0	156.7	41.7	30.492	
4 0	+1.14	24.7	136.9	149.4	37.1	30.259	30.1	4 0	3.34	33.9	142.2	166.4	57.6	30.505	26.2
6 0	1.18	28.2	135.4	164.6	49.6	30.197	32.4	6 0	4.16	35.3	139.5	168.8	66.2	30.490	26.4
8 0	1.33	30.8	134.5	165.5	54.3	30.166	36.7	8 0	4.43	36.5	137.8	168.6	62.2	30.489	27.0
10 0	0.39	32.5	131.9	167.1	56.7	30.157	35.7								
									Term	day	omitted.				

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
Feb. 28. h. m.								Apr. 5. h. m.							
1 50	+4.10	34.5	145.5	152.9	42.5	29.961	31.0	24 0	+6.42	41.0	140.0	179.0	60.5	30.054	33.5
2 0	4.16	34.6	145.0	153.4	42.5	29.949		1 50	6.47	40.2	146.0	180.6	59.2	29.993	34.0
2 10	4.10	34.8	145.1	153.8	43.1	29.966	31.0	2 0	6.40	40.1	144.7	179.1	59.0	30.025	
Apr. 1.								2 10	6.44	40.1	144.5	179.4	58.8	30.011	34.0
24 0	3.28	30.8	146.0	170.8	32.2	30.226	18.3	4 0	7.02	40.2	138.5	179.5	54.5	29.986	35.8
1 0	3.01	30.8	147.9	173.1	53.2	30.208	20.4	5 0	8.12	40.4	133.0	178.3	53.0	29.990	35.0
1 50	3.47	31.5	149.5	181.3	52.0	30.214	20.8	6 0	7.10	40.5	129.7	174.5	50.0	29.995	35.0
2 0	3.42	31.5	147.2	179.3	52.0	30.228		8 0	7.17	41.5	129.3	171.1	50.0	29.973	36.3
2 10	3.37	31.4	145.5	177.8	51.9	30.229	21.6	9 0	6.34	41.3	127.9	172.8	49.5	29.966	36.0
3 0	3.32	31.6	142.0	175.4	53.8	30.110	23.9	10 0	6.12	41.5	131.4	171.2	48.5	29.964	35.4
4 0	4.14	32.3	131.3	176.3	53.0	30.253	26.0	11 0	7.00	42.0	135.0	176.6	48.0	29.972	35.0
5 0	5.10	33.6	135.0	178.2	53.5	30.242	27.3	12 0			136.5	170.5	48.0	29.994	35.0
6 0	5.18	35.5	131.4	178.1	51.5	30.176	28.0	14 0	7.33	42.1	138.0	171.8	48.0	30.007	34.4
7 0	6.23	38.0	129.5	179.1	51.0	30.198	30.3	16 0	7.46	41.3	140.4	171.5	46.0	30.014	34.0
8 0	6.24	38.2	129.5	176.6	53.8	30.206	31.7	17 0	7.38	41.4	140.3	175.3	45.2	30.002	34.2
9 0	6.20	40.5	130.1	175.5		30.178	31.8	18 0	7.46	41.3	140.2	176.8	50.0	30.003	34.3
10 0	6.04	40.5	129.2	173.2	51.5	30.188	32.0	19 0	8.01	41.3	140.3	178.2	54.0	30.001	34.3
11 0	6.05	40.5	133.6	173.5	49.0	30.196	31.9	20 0	8.08	41.2	140.7	178.9	55.0	30.001	34.4
12 0	5.07	39.0	135.5	167.1	46.0	30.209	28.0	21 0	8.05	41.1	141.3	179.8	55.5	30.035	34.6
13 0	5.27	39.0	138.8	165.6	44.5	30.206	27.0	22 0	8.05	41.0	141.9	178.8	57.0	30.063	34.7
13 50	4.37	37.5	144.7	171.1	41.0	30.218	25.4	23 0	7.16	41.2	141.3	179.2	58.8	30.073	34.8
14 0	5.02		145.5	171.2	40.6	30.214	20.3	Apr. 6.							
14 10	5.02	37.5	147.3	170.9	40.5	30.210	25.3	24 0	6.41	41.0	141.8	180.5	60.2	30.114	35.8
15 0	5.16	36.7	146.7	172.7	45.3	30.221	25.4	1 0	6.00	42.0	142.2	184.0	60.4	30.110	38.0
16 0	6.18	36.5	145.0	172.5	47.0	30.209	26.5	1 50	7.20	42.5	141.1	183.1	60.2	30.116	40.3
17 0	7.34	37.0	138.0	171.0	43.5	30.180	28.0	2 0	7.37	42.6	141.5	183.2	60.0	35.108	
18 0	5.37	36.2	140.5	170.8	45.5	30.197	29.0	2 10	7.44	43.0	141.1	182.6	60.1	35.126	42.2
19 0	6.13	36.3	136.7	172.2	49.0	30.190	29.5	3 0			140.0	183.9	61.7	30.134	49.7
20 0	6.00	36.5	132.6	172.5	52.7	30.189	30.5	4 0	10.21	47.0	139.0	186.7	63.5	30.117	51.8
21 0	6.11	37.0	131.5	175.8	56.5	30.193	30.5	5 0	11.34	50.8	135.0	187.6	64.0	30.094	55.4
22 0	6.03	37.5	138.4	176.2	58.0	30.174	30.2	6 0	12.04	52.5	132.0	187.2	66.8	30.033	54.8
23 0	6.38	38.0	137.8	176.5	59.8	30.139	30.0	7 0	13.31	56.0	131.0	185.4	68.0	30.050	57.2
Apr. 2.								8 0	13.39	57.2	132.0	183.9	69.5	30.027	60.3
24 0	6.41	39.3	138.5	177.0	59.6	30.105	31.0	9 0	14.19	58.5	134.5	184.5	70.5	30.013	61.0
1 0	6.39	37.7	141.2	177.4	58.0	30.030	33.0	10 0	15.03	60.4	136.1	184.9	71.3	29.991	61.5
1 50	5.31	37.7	141.7	177.4	56.8	30.013	36.0	11 0	14.36	60.5	137.2	183.6	68.0	30.002	58.2
2 0	5.34	38.0	141.4	177.0	56.8	29.998	36.9	12 0			138.0	180.6	65.0	30.000	50.0
2 10	5.34	38.3	141.2	176.8	56.5	29.983	36.3	13 0	14.15	57.5	138.7	181.2	61.9	29.979	48.0
Apr. 4.								14 0	14.10	56.6	139.5	179.6	60.0	29.971	47.0
1 50	9.11	45.0	141.4	171.4	42.6	30.202	37.2	15 0	14.44	56.0	139.0	177.5	58.0	29.967	45.0
2 0	9.06	45.0	141.2	171.5	42.6	30.197		Apr. 7.							
2 10	9.11	45.0	141.7	171.5	42.7	30.187	37.2	1 50	10.20	48.7	143.8	172.5	48.0	29.832	47.0
2 40	9.11	45.0	141.1	173.8	43.0	30.206	38.0	2 0	10.07	48.8	143.6	173.0	48.0	29.828	
4 0	10.10	45.0	138.0	176.0	44.2	30.204	39.0	2 10	10.14	49.0	143.6	172.7	48.0	29.824	47.0
5 0			133.1	178.6	47.7	30.189	39.1	3 0	10.30	49.3	141.1	176.2	48.9	29.821	47.6
6 0	9.24	45.0	128.1	182.0	52.0	30.187	38.0	4 0	11.10	49.8	136.5	178.8	49.5	29.822	47.0
7 0	9.06	45.0	130.8	177.1	55.0	30.188	38.5	5 0	11.20	50.2	131.4	178.3	50.0	29.824	46.6
8 0	9.05	45.5	132.2	177.0	57.0	30.201	37.5	6 0	11.20	50.5	128.0	177.8	50.5	29.802	47.5
9 0	8.39	45.5	132.2	173.8	58.8	30.177	36.8	8 0	10.38	50.5	130.0	173.8	51.0	29.766	45.2
11 0	7.39	44.0	133.5	176.7	58.0	30.183	35.5	9 0	10.22	50.5	132.1	173.1	50.0	29.727	41.2
12 0			133.0	176.2	56.0	30.189	35.0	10 0	10.23	49.8	135.0	169.8	50.2	29.734	42.5
13 0	7.21	44.0	136.5	176.7	53.8	30.191	35.0	11 0	10.15	49.0	135.3	170.6	49.2	29.734	41.6
14 0	7.25	44.0	135.2	173.8	52.2	30.197	35.0	12 0	10.09	48.5	137.5	170.0	48.0	29.742	40.9
15 0	7.23	43.5	146.8	173.8	52.4	30.168	35.0	13 0	10.09	49.6	137.0	172.8	49.8	29.727	40.5
16 0	8.45	43.5	136.2	176.8	54.5	30.171	35.5	14 0	10.09	48.5	136.0	167.4	52.0	29.730	40.0
17 0	7.44	42.5	137.2	176.0	56.2	30.153	35.4	15 0	10.44	48.5	137.3	175.1	55.0	29.717	40.2
18 0	7.44	42.5	137.5	176.8	56.2	30.130	35.6	16 0	10.35	48.0	136.5	176.0	56.2	29.692	40.0
19 0	7.44	42.0	139.0	177.0	57.0	30.118	36.8	17 0	10.02	48.0	137.0	170.7	58.0	29.714	40.0
20 0	7.22	41.5	140.4	177.2	59.5	30.011	35.8	18 0	10.03	48.0	140.0	170.5	58.0	29.735	40.0
21 0	8.08	41.0	140.2	179.2	59.0	30.028	35.2	19 0	11.00	47.5	140.0	170.7	58.0	29.762	39.5
22 0	7.35	41.0	138.0	179.2	59.0	30.014	36.0	20 0	10.06	47.5	140.0	170.6	58.5	29.774	39.0
23 0	6.35	40.8	139.5	178.8	59.5	30.036	35.2	21 0	10.07	47.0	140.2	170.7	58.5	29.775	39.0

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
22 0	+10.05	42.5	140.2	170.6	59.0	29.725	39.0	8 0	+11.11	55.0	129.0	157.9	63.2	29.730	53.0
23 0	10.11	46.5	140.4	170.8	60.0	29.739	39.0	9 0	9.32	55.8	129.6	176.7	63.3	29.776	54.0
Apr. 8.								10 0	10.33	56.2	131.0	179.4	63.0	29.800	53.0
24 0	9.06	41.5	140.5	170.7	58.5	29.770	40.0	11 0	9.10	55.5	135.0	183.4	61.8	29.818	49.8
1 0	9.03	46.0	145.7	173.7	56.0	29.814	40.0	12 0	7.35	54.2	141.5	192.0	58.8	29.863	45.2
3 0	9.46	46.2	144.4	173.2	51.5	29.839	40.1	13 0	9.15	53.5	142.3	187.0	55.5	29.891	42.1
4 0	10.00	45.5	140.0	174.5	50.6	29.849	39.5	13 50	9.10	49.7	144.6	193.8	53.3	29.948	39.0
5 0	10.06	45.5	136.0	177.0	52.0	29.851	40.0	14 0	8.03	49.5	145.2	190.8	53.0		40.4
6 0	10.05	45.8	133.6	178.4	56.3	29.856	40.5	14 10	8.11	49.4	145.7	189.7	52.5	29.953	39.5
7 0	9.35	45.5	132.2	180.0	59.0	29.855	40.0	15 0	8.04	47.5	142.1	174.8	50.0	29.963	37.5
9 0	8.44	45.7	133.3	176.2	60.6	29.862	38.6	16 0	8.08	46.4	141.7	176.5	48.0	29.988	35.5
10 0	9.18	45.4	133.0	177.8	58.5	29.889	38.3	18 0	8.46	43.3	135.1	168.3	43.5	30.030	34.3
11 0	8.18	44.0	133.9	173.6	55.7	29.912	37.8	Apr. 13.							
14 0	7.28	43.0	137.5	172.3	46.0	29.706	38.0	1 0	10.33	39.0	134.5	180.2	36.7	30.101	36.0
15 0	8.13	43.0	138.5	169.7	45.5	29.906	38.0	1 50	10.31	39.9	128.8	185.3	38.6	30.097	40.5
16 0	8.19	43.0	138.7	168.8	45.0	29.942	38.0	2 0	10.15	40.1	130.0	185.0	39.0	30.096	42.0
18 0	9.45	42.5	138.5	170.9	49.0	29.956	37.5	2 10	9.42	40.4	132.4	184.5	39.5	30.104	43.2
20 0	8.48	42.5	139.0	175.0	56.6	29.955	37.5	5 0	9.05	46.0	146.0	177.0	51.5	30.079	46.0
22 0	8.15	42.0	140.0	177.1	59.1	29.950	36.3	6 0	10.44	47.0	137.0	178.0	54.0	30.074	47.0
23 0	8.06	42.2	139.5	177.8	60.6	29.952	36.5	7 0	9.12	48.0	132.5	180.8	56.5	30.042	45.0
Apr. 9.								8 0	8.29	49.0	135.0	175.2	57.0	30.008	45.0
24 0	7.38	42.0	142.0	170.5	61.8	29.973	38.5	9 0	7.43	49.5	134.8	171.8	56.5	30.005	43.2
1 0	7.01	42.5	144.2	175.3	57.5	29.973	38.0	10 0	7.38	49.5	131.0	171.5	56.0	29.988	42.8
1 50	7.22	42.5	146.2	174.0	54.4	29.978	38.0	11 0	7.26	48.5	128.0	177.3	54.0	29.980	40.0
2 0	7.27	42.5	146.4	173.8	54.6	29.976		12 0	6.47	46.0	135.2	174.0	50.4	29.972	37.3
2 10	7.41	42.5	146.2	173.6	54.2	29.975	38.2	13 0	7.00	41.0	131.0	177.2	49.0	29.982	38.4
Apr. 11.								13 50	8.04	46.0	134.0	178.2	50.0	29.975	37.5
1 0	8.34	42.7	148.0	176.8	41.0	29.716	46.5	14 0	8.10	46.0	134.5	178.0	50.5	29.961	37.5
1 50								14 10	8.07	46.0	134.7	178.2	51.0	29.945	37.5
2 0	9.08	44.3	146.0	175.9	44.2	29.691	55.2	15 0	8.32	47.0	135.1	178.1	52.0	29.924	38.0
2 10	9.20	44.7	144.8	176.1		29.685	56.5	16 0	8.36	46.0	136.0	179.3	56.0	29.908	39.0
3 0	10.14	47.5	142.7	178.0	49.5	29.705	60.0	17 0	8.36	46.0	136.0	180.0	57.0	29.880	38.2
4 0	11.13	50.7	140.0	182.1	55.0	29.768		18 0	8.36	45.5	136.3	180.0	57.0	29.876	38.0
5 0	12.43	53.5	136.9	184.5	59.0	29.652	64.6	19 0	9.21	45.0	137.0	179.0	56.0	29.855	
6 0	13.33	56.0	132.6	185.5	61.0	29.666	62.0	20 0	9.21	44.5	130.0	178.9	55.5	29.855	
7 0	14.22	57.5	131.5	183.7	63.0	29.652	62.0	21 0	8.38	44.5	130.2	179.3	54.5	29.851	
8 0	15.32	59.5	132.0	181.5	64.0	29.641	62.0	22 0	8.09	44.0	138.1	178.8	55.5	29.832	
9 0	15.49	60.5	135.0	179.8	64.0	29.678	61.0	23 0	8.40	44.0	140.0	179.2	55.2	29.811	
12 0	12.07	59.0	141.0	187.0	60.0	29.695	54.0	Apr. 14.							
13 0	12.43	57.5	139.0	180.9	59.0	29.768	50.5	24 0	8.29	43.5	136.5	180.8	56.0	29.748	37.6
13 50	12.45	56.6	136.2	178.6	56.2	29.779	47.5	1 0	8.09	43.5	141.4	177.3	55.0	29.661	38.0
14 0	11.32	56.5	136.4	177.4	56.0	29.786	47.2	1 50	8.11	44.0	143.2	179.1	55.0	29.695	39.0
14 10	11.39	56.3	137.6	177.1	55.8	29.794	47.0	2 0	8.07	44.0	144.5	179.9	55.0	29.699	
15 0	12.20	54.5	147.0	174.7	54.2	29.810	45.0	2 10	8.02	44.0	144.7	179.3	55.2	29.695	39.0
16 0	11.46	53.5	148.8	178.5	53.0	29.815	42.0	3 30	9.30	44.5	140.1	182.0	55.5	29.672	39.0
17 0	11.47	52.5	143.6	179.0	54.9	29.801	44.4	4 0	9.30	44.5	139.1	182.1	55.0	29.652	39.0
18 0	13.48	51.7	148.9	189.3	58.0	29.829	42.0	7 0	9.25	46.0	128.5	170.2	51.0	29.573	41.0
19 0	8.13	51.5	144.1	183.0	59.0	29.697	41.0	8 0	9.40	47.5	129.8	170.6	50.5	29.718	43.0
20 0	9.14	51.3	144.8	181.0	57.3	29.690	39.0	9 0	9.00	47.0	132.8	172.0	50.5	29.597	42.0
21 0	9.12	49.5	140.2	180.3	56.0	29.688	38.0	12 0	9.27	46.2	137.1	174.5	49.5	29.685	40.5
22 0	9.30	47.0	140.1	179.3	58.2	29.660	36.0	13 50	8.22	45.5	134.0	171.3	47.4	29.608	34.7
23 0	9.14	47.5	142.0	180.2	57.5	29.749	35.0	14 0	8.24	45.4	134.5	171.4	49.2	29.647	32.6
Apr. 12.								14 10	8.40	45.4	135.1	173.0	49.1	29.686	34.5
24 0	9.44	46.5	132.0	181.5	56.5	29.817	36.5	15 0	8.27	45.4	135.3	173.0	49.1	29.648	34.2
1 0	10.24	46.0	122.0	182.8	55.0	29.881	38.0	16 0	8.20	44.5	166.0	188.2	52.0	29.657	36.0
1 50	10.42	45.6	124.0	180.0	55.0	29.854	39.7	17 0	8.17	44.5	119.6	159.9	52.5	29.654	36.2
2 0	11.02	46.0	128.4	177.7	55.0	29.882		17 30				72.3	183.0		
2 10	11.04	46.2	131.3	177.5	55.1	29.876	41.2	18 0	27.00	49.0	86.0	249.8	54.9	29.718	36.3
3 0	11.30	47.3	141.0	182.3	56.7	29.840	44.0	19 0	off scale	45.2	69.5	off scale	57.0	29.837	35.5
4 0	11.22	48.8	139.6	187.1	58.0	29.860	47.0	20 0	23.40	45.5	112.0	215.1	58.2	29.843	41.5
5 0	11.32	50.1	132.0	188.0	59.7	29.834	49.0	21 0	15.26	46.0	147.2	205.5	60.0	29.849	36.7
6 0	12.07	52.0	130.5	186.6	61.8	29.825	50.2	22 0	16.05	45.5	168.0	197.5	61.5	29.839	33.5
7 0	12.12	53.6	128.6	182.3	63.1	29.792	52.2	23 0	21.03	46.0	131.7	216.7	62.5	29.849	32.5

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	
Apr. 15 h. m.								h. m.								
24 0	+11.42	49.2	139.7	190.4	62.8	29.870	37.4	16 0	+13.37	55.8	142.2	178.4	56.5	29.909	47.6	
1 0	10.12	44.8	149.5	190.5	61.8	29.882	40.9	17 0	13.08	54.4	140.0	176.8	55.5	29.902	43.0	
1 50	9.39	45.6	144.6	191.3	60.8	29.863	45.0	18 0	12.38	54.0	139.1	176.6	55.0	29.880	46.0	
	9.39	45.6	149.4	189.7	60.8	29.876	46.2	19 0	12.12	53.5	137.5	179.0		29.715	45.5	
2 0	9.39	46.2	148.5	190.0	60.8	29.872	48.3	20 0	12.41	57.5	139.0	180.0	58.0	29.746	45.5	
2 10	9.39	46.2	148.5	190.0	60.8	29.872	48.3	21 0	12.38	57.5	140.0	181.2	60.8	29.738	45.5	
3 0	10.08	47.7	142.2	199.0	62.3	29.841	52.2	22 0	11.47	52.0	140.0	182.2	62.8	29.819	45.0	
4 0	11.25	49.5	124.1	204.8	64.0	29.872	55.1	23 0	11.33	52.0	141.0	182.3	63.2	29.803	45.2	
5 0	11.29	52.0	127.0	200.0	66.0	29.857	57.3	Apr. 22.								
6 0	12.1	53.5	127.4	193.2	67.6	29.861	58.2	1 0	13.23	54.2	142.9	183.0	61.9	29.786	54.0	
7 0	8.11	57.5	142.8	175.0	68.2	29.814	59.3	1 50	13.21	54.6	142.5	184.2	63.0	29.766	63.5	
10 0	10.34	57.6	136.0	185.0	66.8	29.793	57.5		2 0	13.38	55.0	142.3	184.6	63.2	29.772	
11 0	11.00	57.0	135.0	182.5	65.0	29.800	54.7	2 10	13.22	55.2	142.2	185.0	63.6		65.2	
18 0	26.16	49.0	155.2	208.6	51.2	29.949	38.2	4 0	16.25	60.5	134.4	189.3	69.8	29.687	74.5	
19 0	27.04	49.0	127.3	203.2	52.8	29.924	38.0	5 0	17.14	63.1	132.5	191.6	74.5	29.650	80.0	
20 0	24.02	49.0	164.2	220.5	58.2	29.915	39.0	6 0	18.10	65.5	132.6	191.5	77.0	29.655	79.6	
21 0	19.28	48.0	163.7	201.6	59.0	29.943	38.2	7 0	20.03	74.0	133.0	199.0	82.0	29.597	82.0	
22 0	10.17	48.6	154.9	184.5	58.2	29.979	36.2	11 0	vibrating	77.7	135.0	202.0	82.0	29.480	77.0	
23 0	9.38	47.0	148.4	183.0	58.8	29.989	35.6	13 0	22.40	74.5	136.4	174.5	75.0	29.477	68.0	
Apr. 16.								13 50	22.40	73.5	138.3	192.0	75.0	29.457	62.5	
24 0	8.38	46.2	147.4	181.4	56.4	30.025	36.5	14 0	21.26	73.0	138.5	194.5	74.6	29.461	62.5	
1 50	9.09	46.0	145.0	184.3	54.0	30.027	42.5	14 10	21.30	72.6	137.7	193.7	74.5	29.475	65.5	
	9.15	46.0	145.0	184.0	54.0			15 0	19.20	72.0	138.0	173.4	72.0	29.466	63.5	
2 0	9.15	46.0	145.0	184.0	54.0			16 0	18.47	71.0	139.6	193.2	71.6	29.473	62.0	
2 10	9.25	46.2	145.0	184.4	54.3	30.032	45.3	17 0	19.03	70.0	142.5	189.8	70.1	29.475	60.9	
Apr. 19.								18 0	19.17	68.8	139.3	189.2	69.0	29.478	60.2	
1 50	8.38	41.4				29.717	38.2	19 0	18.23	67.9	141.5	192.9	67.9	29.471	61.2	
	8.30	41.4	135.8	174.6	40.0			20 0	18.25	67.5	140.1	191.6	67.1	29.480	64.0	
2 0	8.22	41.5	137.0	176.6	40.0	29.733	43.0	21 0	18.11	66.7	140.8	191.1	66.3	29.540	63.4	
3 0	8.15	41.8	135.9	174.3	41.2	29.730	38.9	22 7	17.11	66.4	141.2	189.7	65.3	29.613	60.0	
4 0	8.27	42.3	135.2	178.2	46.0	29.695	39.5	23 0	16.21	64.0	142.2	188.9	64.8	29.658	56.0	
5 0	8.22	43.0	134.8	182.6	52.0	29.670	40.0	Apr. 23.								
6 0	8.42	44.0	131.1	180.5	58.0	29.632	41.2	24 0	15.06	63.0	141.2	188.4	63.2	29.727	55.0	
7 0	8.26	44.2	133.0	181.9	59.4	29.627	40.7	1 0	14.25	61.5	139.4	190.5	62.4	29.766	56.0	
8 0	8.20	44.5	132.0	182.2	59.5	29.584	41.0	2 0				141.6	190.9	62.2	29.799	55.8
9 0	8.05	44.5	134.2	179.7	58.3	29.572	40.2	2 10	14.30	59.7	141.4	191.5	62.3	29.799	55.2	
10 0	8.03	44.5	135.0	184.0	60.2	29.542	40.2	Apr. 25.								
11 0	8.10	44.3	138.4	180.5	60.2	29.548	40.2	2 0	8.45	47.6	142.4	181.4	46.2	29.876		
12 0	8.04	44.3	137.9	181.2	59.8	29.537	40.0	2 10	9.00	47.7	141.9	182.0	46.1	29.884	44.5	
13 0	8.34	44.5	153.3	179.4	58.0	29.530	40.0	5 0	10.43	50.0	132.6	185.0	48.7	29.838	48.2	
13 50	9.05	44.5	140.0	183.6	58.6	29.528	40.0	6 0	10.47	51.0	130.8	183.5	50.0	29.825	50.0	
	9.09	44.5	140.0	181.8	58.7	29.529	40.0	7 0	11.01	52.5	129.1	182.0	52.1	29.813	52.0	
14 0	9.06	44.5	138.3	183.0	59.0	29.529	40.0	8 0	11.40	53.0	131.5	179.8	53.5	29.713	50.5	
16 0	9.14	44.5	138.0	181.8	58.5	29.499	40.0	9 0	11.00	53.5	134.5	179.2	54.0	29.803	51.0	
17 0	10.16	45.5	132.8	176.2	56.2	29.494	40.0	11 0	10.41	52.8	137.6	180.7	54.0	29.811	41.7	
18 0	10.06	46.0	138.0	179.0	57.5	29.491	40.4	12 0	10.34	52.0		179.2	54.0	29.806	44.5	
20 0	9.24	46.0	139.0	181.0	61.0	29.466	40.5	13 0	10.09	51.2	136.6	176.8	52.0	29.815	43.5	
21 0	9.24	46.0	139.8	181.4	62.1	29.478	40.5	14 0	10.40	51.0	136.5	177.0	51.0	29.802	43.5	
22 0	9.38	46.0	142.6	182.3	62.0	29.460	40.8	14 10	10.45	50.1	137.0	177.0	51.0	29.790	43.0	
23 0	9.25	46.0	142.6	181.0	63.0	29.482	41.0	15 0	10.48	50.5	139.0	178.0	50.2	29.806	43.0	
Apr. 20.								16 0	10.48	50.0	138.0	179.8	50.5	29.784	43.0	
24 0	9.30	46.0	144.0	182.0	63.0	29.597	42.0	17 0	10.22	50.0	137.0	180.2	53.0	29.758	41.5	
1 50	10.14	46.8	137.8	179.0	59.0	29.524	44.0	19 0	10.24	49.5	138.2	183.2	57.0	29.768	43.0	
	10.31	46.8	137.5			29.526		20 0	10.05	49.0	140.0	183.5	56.0	29.767	42.0	
2 0	10.24	47.0	138.4	178.2	58.2	29.530	44.5	21 0	9.31	48.7	140.5	181.5	56.0	29.761	42.0	
3 0	10.15	47.5	137.0	179.0	57.5	29.617	46.4	22 0	9.24	48.8	139.0	182.0	57.0	29.763	42.0	
5 0	12.02	50.4	134.4	183.1	58.7	29.555	52.0	23 0	9.11	48.5	139.5	182.5	57.5	29.743	41.0	
7 0	12.21	53.7	134.1	181.2	61.5	29.587	56.1	Apr. 26.								
8 0	12.48	56.0	135.0	181.0	63.5	29.697	56.0	24 0	9.12	48.5	146.0	183.0	58.0	29.741	41.5	
9 0	13.29	56.7	136.9	183.0	64.0	29.635	56.0	1 0	8.36	48.0	146.3	185.1	58.5	29.757	41.5	
Term	day	omit	ted.					1 50	8.33	48.0	142.9	186.5	57.3	29.732	41.5	
Apr. 21.								2 0	8.41	48.1	142.7	186.6	57.2	29.730		
11 0	16.08	63.0	140.0	179.0	67.0	29.918	58.0	2 10	8.42	48.2	141.5	186.8	57.2	29.726	41.3	
12 0	15.10	62.0	137.7	182.0	65.6	29.904	54.0									

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								Apr. 29.							
3 0	+9.03	48.0	138.5	187.2	56.2	29.724	41.5	h. m.							
4 0	9.03	48.5	134.2	186.0	55.5	29.660	41.8	1 0	+8.33	46.0	144.0	178.2	46.5	29.667	44.5
7 0	9.48	43.5	132.1	183.9	55.8	29.583	43.3	1 50	8.39	46.6	142.7	181.0	47.8	29.651	47.0
8 0	9.46	48.8	130.9	180.3	55.3	29.539	43.0	2 0	9.09	46.9	142.5	181.6	48.0	29.657	
9 0	9.46	49.0	133.0	178.0	54.5	29.511	43.0	2 10	9.16	47.1	144.7	182.5		29.653	47.2
10 0	9.37	48.7	134.9	179.5	53.5	29.536	43.0	3 0	10.31	48.3	143.2	184.8	51.0	29.683	50.0
11 0	8.48	48.4	137.0	177.0	52.4	29.475	43.2	3 30	11.38	52.0	137.5	187.5	55.5	29.644	56.0
12 0	8.25	48.5	139.0	180.0	51.5	29.462	43.2	4 0	12.31	53.5	131.1	187.3	59.6	29.511	54.1
13 0	8.35	48.0	143.0	180.6	51.0	29.451	43.0	8 0	12.31	57.8	129.4	185.8	62.0	29.606	52.0
14 0	9.40	48.0	140.0	178.9	50.2	29.431	43.6	9 0	12.04	58.0	126.0	185.4	61.0	29.594	55.0
15 0	8.24	47.6	137.5	179.1	50.8	29.422	43.0	10 0	12.18	57.5	127.8	185.8	60.0	29.656	55.0
16 0	9.17	49.0	138.5	181.0	53.3	29.412	42.5	11 0	11.12	56.4	131.2	187.3	58.8	29.632	54.3
17 0	9.08	48.6	138.2	181.4	55.5	29.394	42.5	12 0	12.22	56.5	134.0	185.0	58.0	29.645	52.5
18 0	9.04	48.2	140.0	183.4	57.8	29.348	42.5	13 0	12.00	55.0	135.0	181.0	56.5	29.657	47.0
19 0	9.00	48.5	141.0	185.0	58.3	29.247	41.4	14 0	11.18	54.6	137.6	182.9	54.0	29.625	43.0
20 0	8.36	48.5	141.7	184.4	60.3	29.218	41.7	15 0	11.03	54.0	138.4	182.8	53.2	29.649	41.6
21 0	9.24	49.8	142.8	184.7	61.5	29.238	42.0	17 0	10.02	50.6	137.1	183.5	55.2	29.667	36.0
22 0	9.23	49.0	143.5	186.5	62.9	29.246	41.9	18 0	10.02	49.5	138.0	183.0	56.0	29.765	34.0
23 0	9.03	48.7	142.8	187.0	62.5	29.212	42.0	19 0	10.15	49.0	138.0	182.5	55.5	29.765	34.0
Apr. 27.								20 0	10.12	49.0	139.0	184.0	55.0	29.735	35.0
24 0	9.10	48.7	143.0	187.2	64.3	29.160	42.1	21 0	9.33	47.0	136.0	183.0	56.0	29.695	32.0
1 0	9.09	48.7	142.0	189.8	65.0	29.298	43.2	22 0	8.36	46.0	132.0	184.0	56.0	29.695	32.0
1 50	9.27	49.5	140.8	190.4	63.3	29.236	47.5	23 0	7.03	47.0	132.0	184.0	57.0	29.495	34.0
2 0	10.00	49.9	140.0	190.2	63.2	29.259		Apr. 30.							
2 10	9.47	50.4	139.8	190.2	63.0	29.240	49.1	24 0	9.04	47.0	133.0	186.0	57.0	29.729	36.0
5 0	13.30	55.5	133.2	191.3	64.4	29.238	57.1	May 2.							
6 0	14.31	58.5	128.6	187.8	64.6	29.307	58.0	1 50	11.35	52.8	144.2	178.1	51.0	29.415	52.5
8 0	14.10	60.7	127.2	189.0	65.2	29.233	60.0	2 0	11.48	53.0	144.4	178.8	51.0	29.408	
9 0	14.08	61.0	130.0	189.0	64.5	29.235	58.5	2 10	12.16	53.2	145.2	178.9	51.0	29.380	53.2
10 0	14.27	60.6	134.0	185.2	63.5	29.258	57.0	3 0	12.35	54.5	140.5	182.5	55.0	29.497	57.0
12 0	12.47	58.4	134.0	184.0	60.0	29.333	51.0	4 0	13.33	56.7	136.0	187.0	58.0	29.415	60.0
13 0	12.05	56.0	136.2	182.9	57.0	29.378	46.8	5 0	14.02	58.0	132.5	187.0	59.5	29.425	61.0
14 0	12.29	55.5	138.5	181.4	56.0	29.290	46.0	7 0	14.05	59.0	129.5	186.3	60.5	29.432	57.0
15 0	11.14	53.5	138.4	182.5	55.0	29.256		9 0	12.47	57.6	134.0	184.1	58.5	29.411	55.2
16 0	10.41	52.5	138.0	183.2	56.0	29.247	43.0	10 0	12.24	57.3	137.5	183.7	60.0	29.419	54.8
17 0	10.23	51.8	138.2	184.3	56.0	29.330	41.5	11 0	12.26	56.9	139.0	185.5	63.8	29.415	51.8
18 0	10.20	52.0	138.5	183.2	56.0	29.343	41.0	17 0	12.19	55.5	151.9	183.4	59.0	29.437	45.0
19 0	10.28	49.5	139.0	182.2	56.0	29.368	39.5	18 0	12.19	54.5	152.9	182.5	57.0	29.576	45.0
20 0	9.32	48.5	138.9	183.3	56.5	29.425	38.6	19 0	12.04	54.5	153.0	183.1	57.0	29.570	43.5
21 0	9.28	49.5	138.9	184.0	56.3	29.354	37.0	20 0	12.24	55.5	153.0	184.5	58.5	29.660	42.0
22 0	10.12	50.5	139.9	183.8	56.5	29.428	38.0	21 0	12.25	56.0	153.0	185.5	60.5	29.666	43.0
23 0	8.05	51.5	142.0	184.0	58.4	29.525	38.0	22 0	12.35	56.2	154.5	184.2	60.0	29.673	44.0
Apr. 28.								23 0	12.18	55.7	155.5	185.1	59.3	29.681	44.5
24 0	10.31	54.0	143.0	184.0	57.3	29.452	40.5	May 3.							
1 0	11.01	53.5	142.2	184.3	56.5	29.463	48.0	1 50	11.41	55.2	151.7	187.8	56.0	29.734	49.4
1 50	11.40	53.6	142.2	186.0	56.8	29.456	49.3	2 0	11.40	55.0	152.1	187.5	56.0	29.740	49.4
2 0	11.47	53.6	142.7	186.2	57.0	29.452		2 10	12.15	55.0	152.2	187.6	56.0	29.741	48.3
2 10	11.46	53.8	142.9	186.4	57.0	29.443	50.4	May 5.							
5 0	12.13	55.0	131.2	188.4	59.5	29.464	51.4	1 50	9.35	47.8	159.0	180.5	45.2	30.111	50.3
6 0	12.18	55.0	140.5	187.6	59.0	29.452	52.9	2 0	9.34	48.2	158.5	180.9	45.8	30.105	51.0
7 0	12.12	55.5	130.2	184.2	59.0	29.461	55.0	2 10	9.42	48.5	157.7	181.4	46.1	30.103	
9 0	12.21	56.0	132.5	179.8	58.0	29.365	50.0	3 0	10.32	50.5	153.0	184.3	50.0	30.102	54.0
10 0	12.21	55.0	135.2	179.5	57.0	29.480	50.0	4 0	12.10	53.7	146.3	187.2	55.5	30.080	57.0
11 0	11.48	53.5	136.0	179.8	56.0	29.542	46.2	6 0	13.41	57.5	143.2	188.1	60.8	30.076	60.2
12 0	11.46	53.5	137.0	179.0	54.5	29.523	46.0	9 0	15.39	63.0	149.7	187.4	65.6	29.987	64.0
13 0	10.46	51.5	138.0	178.7	52.5	29.643	43.0	10 0	17.08	64.0	150.7	188.3	65.5	29.949	64.0
13 50	10.22	51.0	138.7	179.4	51.0	29.582	43.0	11 0	16.03	63.5	150.0	189.0	65.0	29.978	61.8
14 0	10.22	51.0	138.0	179.2	50.6	29.580	43.0	13 0	15.04	62.8	150.0	186.0	62.4	30.011	56.0
14 10	10.24	50.6	138.9	179.9	50.5	29.590	42.6	13 50	13.43	59.0	152.1	156.1	58.1	29.964	50.0
15 0	10.11	50.4	139.8	177.6	49.8	29.602	41.3	14 0	13.32	58.6	152.0	159.4	55.5	29.946	
16 0	9.30	49.5	139.2	179.9	48.9	29.617	40.0	14 10	13.16	58.0	151.3	161.9	55.7	29.978	50.0
17 0	9.23	47.8	138.0	182.6	51.0	29.611	39.0	15 0	12.08	58.0	150.5	180.9	57.0	29.999	50.0
								16 0	13.04	57.0	151.5	180.9	56.5	29.970	50.0

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								May 11.							
17 0	+12.16	56.3	151.3	180.6	56.0	29.979	48.6	h. m.							
18 0	12.11	55.6	150.5	183.2	59.8	29.948	47.6	24 0	+10.40	51.0	156.0	191.5	61.6	29.581	48.0
19 0	12.45	55.0	151.1	184.0	62.2	29.956	45.8	1 0	10.26	51.8	157.0	190.5	61.0	29.591	53.5
20 0	12.41	54.0	152.5	184.7	62.0	29.957	44.5	1 52	11.08	53.1	155.1	192.7	62.2	29.600	56.6
21 0	11.35	53.5	151.0	186.0	62.5	29.951	43.8	2 0	11.24	53.4	155.1	193.0	62.1	29.595	
22 0	11.30	52.8	154.2	188.0	63.5	29.939	42.2	2 8	11.27	53.6	154.7	193.0	62.3	29.592	57.8
23 0	11.46	53.5	158.6	187.8	65.0	29.948	43.2	3 0	12.07	55.2	151.0	195.2	64.0	29.581	57.0
May 6.								4 0	13.30	58.0	144.0	196.5	66.0	29.576	60.0
1 52	12.32	55.2	155.5	189.2	61.0	29.836	59.8	5 0	16.12	60.7	144.4	195.1	66.1	29.562	59.8
2 0	12.34	55.3	156.8	190.3	61.1	29.847	60.0	6 0	16.23	61.9	140.8	194.2	68.6	29.545	52.8
2 8	12.37		156.1	190.0	61.5	29.861	60.3	8 0	14.39	62.2	143.5	190.1	69.2	29.464	57.7
3 0	14.05	58.0	152.0	188.8	63.5	29.818	65.0	9 0	15.43	63.0	146.0	186.2	65.5	29.434	58.0
5 0	15.15	61.5	136.5	195.9	69.5	29.769	68.8	11 0	13.35	63.0	150.0	182.5	61.5	29.484	59.0
6 0	16.02	64.5	135.0	153.8	71.5	29.728	70.0	12 0	14.11	62.5	151.0	186.4	62.4	29.486	54.5
7 0	17.44	66.5	136.5	192.7	73.0	29.641	71.8	14 0	14.09	61.0	151.5	186.6	60.0	29.549	49.0
9 0	16.33	69.5	142.1	191.9	74.2	29.657	71.8	15 0	13.29	60.0	149.0	187.5	59.5	29.544	48.6
11 0	16.38	69.2	144.2	197.5	73.0	29.659	68.5	16 0	13.26	57.5	159.5	188.5	61.0	29.578	48.0
13 0	16.46	67.6	147.5	192.7	69.4	29.693	64.4	May 12.							
14 0	16.34	67.0	151.0	190.1	68.0	29.717	61.5	24 0	12.08	55.0	160.1	185.4	55.6	29.611	50.0
15 0	16.21	66.5	152.6	190.8	67.0	29.741	59.6	1 0	12.43	55.0	159.0	187.4	55.0	29.622	51.4
16 0	16.41	64.5	153.0	188.6	64.5	29.708	54.5	1 52	12.21	55.6	156.7	188.6	55.4	29.639	53.3
17 0	15.23	63.0	152.0	188.2	63.0	29.713	51.0	2 0	12.14	55.9	157.0	188.4	55.5	29.631	52.3
18 0	15.45	61.5	154.7	186.5	61.0	29.823	50.0	2 8	12.22	55.8	156.0	188.9	55.5	29.631	52.7
19 0	14.22	60.5	153.2	185.2	60.0	29.772	48.0	3 0	12.40	56.5	155.0	190.8	57.0	29.544	55.0
20 0	14.03	60.0	155.0	192.0	60.8	29.757	44.0	4 0	13.18	57.7	150.0	191.3	59.5	29.658	58.1
21 0	12.21	56.5	155.0	190.5	63.5	29.840	42.0	5 0	14.36	59.0	145.0	191.0	60.8	29.656	57.0
22 0	12.32	55.8	157.0	188.5	63.0	29.870	40.0	6 0	14.17	60.5	140.0	190.5	61.9	29.654	60.3
23 0	11.31	57.5	161.2	189.0	61.0	29.898	39.0	7 0	15.12	61.0	140.0	187.0	62.5	29.660	58.4
May 9.								8 0	15.29	61.6	142.5	185.2	62.4	29.664	59.0
1 50	9.43	48.7	155.0	178.4	46.5			9 0	15.49	60.5	145.0	184.3	60.2	29.664	58.0
2 0			154.6			29.598	44.0	10 0	14.28	61.5	146.2	187.0	64.2	29.682	59.0
2 10	9.38	48.5	154.5	178.9	46.5			11 0	14.06	60.5	148.5	187.0	63.5	29.695	57.5
5 0	10.42	49.7	143.5	180.2	47.9	29.589	46.4	12 0	13.11	59.2	149.3	185.6	62.1	29.720	55.6
6 0	10.10	51.0	141.3	179.9	49.8	29.576	50.4	13 0	13.08	59.0	151.0	184.7	59.0	29.787	53.0
7 0	11.27	52.3	141.4	182.5	52.1	29.572	50.8	13 52	13.26	59.0	152.0	184.5	59.0	29.812	50.6
8 0	10.22	53.2	143.7	180.8	53.4	29.609	50.7	14 0	13.34	58.5	152.0	184.5	59.0	29.810	50.5
9 0	11.35	53.5	145.0	183.0	54.0	29.565	49.0	14 8	14.44	58.4	151.7	183.9	58.6	29.812	50.0
11 0	9.33	52.5	150.5	176.1	52.0	29.590	45.0	23 0	8.04	50.0	155.7	176.2	45.5	29.856	40.5
12 20	8.02	50.5	152.2	182.2	50.0	29.595	41.3	May 13.							
13 0	8.16	49.8	151.2	181.2	49.0	29.622	40.0	24 0	11.32	50.5	157.0	176.7	45.0	29.878	46.6
May 10.								1 0	10.06	50.5	157.7	181.2	46.0	29.852	51.0
1 52	8.37	46.6	156.6	179.0	43.8	29.589	49.5	1 52	11.17	52.2	156.7	183.7	50.0	29.822	54.0
2 0	9.00	46.8	157.3	179.3	44.0	29.574		2 0	10.49	52.5	155.5	183.4	50.1	29.822	
2 8	8.43	46.8	157.1	178.6	44.2	29.575	50.0	2 8	11.21	52.8	155.3	184.1	50.5	29.810	54.7
9 0	8.33	49.0	145.0	175.5	48.0	29.439	49.2	3 0	12.20	55.0	151.0	187.0	54.4	29.796	58.0
10 0	8.10	49.5	147.0	175.5	49.5	29.430	49.5	5 0	14.37	59.5	144.0	188.5	61.5	29.743	61.6
11 0	7.36	49.5	151.0	180.0	52.2	29.552	48.5	7 0	16.04	64.5	141.5	189.0	66.0	29.677	65.5
12 0	8.27	49.5	150.0	184.5	57.5	29.546	47.5	8 0	16.23	65.5	143.0	188.8	66.1	29.649	65.6
13 0	10.15	52.5	148.5	186.5	60.0	29.560	45.0	13 0	14.44	61.5	150.5	186.0	59.5	29.588	55.0
13 52	10.13	52.0	149.0	187.0	61.0	29.560	45.0	14 0	15.42	61.5	150.6	186.0	59.2	29.618	54.2
14 0	10.13	51.8	149.6	187.0	61.0	29.576	45.8	15 0	15.34	61.6	149.5	184.2	58.6	29.606	55.0
14 8	10.06	51.8	150.0	187.0	61.0	29.547	44.6	16 0	14.32	60.6	150.2	186.6	59.0	29.646	55.0
15 0	10.26	51.5	156.0	184.0	60.5	29.552	45.5	May 14.							
16 0	11.18	51.5	157.5	190.5	62.0	29.565	45.0	24 0	12.42	56.2	154.5	182.9	55.5	29.841	48.0
17 0	11.30	51.0	150.6	193.0	64.0	29.549	45.0	1 0	12.19	56.0	156.4	184.5	56.8	29.857	47.8
18 0	11.25	50.5	142.0	191.0	64.0	29.566	45.5	1 52	12.40	57.5	155.0	187.2	60.0	29.859	51.0
19 0	11.12	51.0	154.6	192.0	66.0	29.561	44.8	2 0	12.47	58.0	154.2	187.7	60.4	29.851	50.8
20 0	11.15	51.0	151.0	193.5	67.4	29.539	43.8	2 8	13.04	58.2	154.0	188.4	60.6	29.853	50.9
21 0	10.20	50.8	153.4	192.5	66.0	29.544	42.0	May 16.							
22 0	10.16	51.0	153.0	192.0	64.5	29.552	42.0	1 0	17.01	52.0	134.5	198.9	48.3	29.811	52.0
23 0	9.40	51.2	153.3	191.6	62.8	29.566	43.5	1 52	17.24	53.6	141.5	195.0	50.0	29.805	58.0
23 40	9.22	51.0	153.1	192.0	62.0	29.582	46.0	2 0	17.08	53.7	144.8	195.9	50.2	29.773	57.2
								2 8	17.01	54.0	146.6	196.5	50.8	29.782	56.9

Göttingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Göttingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
3 0	+16.07	55.9	139.6	194.7	54.6	29.821	59.0	1 52	+17.01	62.8	154.8	193.3	61.2	29.924	69.0
4 0	15.34	58.2	146.2	197.0	55.5	29.774	62.2	2 0	16.37	63.2	152.4	194.4	61.8	29.926	
5 0	16.08	61.0	146.3	200.0	63.0	29.706	65.0	2 8	16.40	63.5	151.0	194.6	62.0	29.923	69.0
6 0	16.16	63.5	143.5	193.0	66.0	29.702	66.3	3 0	18.39	66.0	147.0	195.5	66.8	29.904	73.0
7 0	16.45	65.0	146.0	191.5	68.5	29.615	68.5	4 0	19.07	68.5	147.9	196.2	70.7	29.873	75.0
8 0	16.15	67.5	144.7	192.8	70.0	29.711	69.3	5 0	20.00	72.4	145.0	198.8	74.0	29.848	77.3
9 0	17.31	69.0	149.0	187.8	70.0	29.713	70.0	6 0	20.00	75.0	143.0	197.0	75.0	29.815	77.0
10 0	17.17	69.5	147.3	193.4	70.0	29.706	68.5	7 0	20.05	76.0	144.0	196.0	75.0	29.867	76.0
11 0	17.47	69.0	148.0	194.8	69.0	29.739	67.0	8 0	21.03	73.0	146.0	197.0	74.0	29.870	76.0
12 0	16.42	68.5	149.0	193.5	68.2	29.764	63.5	9 0	21.43	75.0	147.5	196.6	76.0	29.755	76.0
13 0	16.00	66.5	150.0	190.8	66.0	29.809	59.4	12 0	17.49	69.5	149.0	189.4	68.2	29.958	56.3
13 52	16.00	65.5	149.2	190.7	64.0	29.832	57.0	13 0	15.45	66.5	151.0	189.7	65.5	30.120	52.5
14 0	16.00	65.5	151.0	190.0	64.0	29.834	57.0	14 0	17.42	66.0	155.7	189.1	64.2	30.055	52.8
14 8	16.00	65.5	151.0	189.2	64.0	29.820	57.0	15 0	16.38	63.5	150.5	188.1	62.7	30.088	51.2
15 0	15.12	64.0	162.7	194.0	62.5	29.851	55.0	16 0	14.46	61.7	151.7	188.2	60.7	30.119	50.0
16 0	15.39	63.0	165.2	200.7	61.0	29.817	53.0	18 0	14.39	59.0	152.3	186.0	57.5	30.172	45.0
17 0	15.14	62.0	159.7	192.5	60.0	29.896	52.0	19 0	13.05	57.0	154.0	184.0	56.0	30.134	43.0
18 0	17.03	60.5	148.7	186.7	59.0	29.935	51.0	20 0	13.43	56.0	151.8	184.0	55.0	30.054	42.0
19 0			148.0	187.1	61.0	29.944	49.5	21 0	12.48	55.0	151.9	185.4	57.0	30.039	43.0
20 0			149.5	188.0	62.1	29.956	48.8	22 0	11.18	54.0	152.0	186.5	58.0	30.043	42.0
21 0			153.7	197.5	61.9	29.979	49.7	23 0	11.05	53.0	157.0	184.0	58.0	30.094	41.0
22 0	19.10	58.4	139.5	192.9	61.4	29.979	48.0	May 20.							
23 0	15.11	58.2	155.5	186.4	59.1	30.006	51.2	24 0	10.20	52.0	153.0	183.7	58.0	30.106	38.0
May 17.								1 52	10.21	50.5	151.6	183.2	55.9	30.275	36.2
24 0	17.11	60.5	148.5	192.5	59.8	30.052	58.0	2 0	10.08	50.0	150.5	182.7	55.3	30.279	
1 0	16.35	61.0	156.8	192.2	61.0	30.080	62.0	2 8	9.20	49.0	147.5	182.9	55.0	30.279	36.0
1 52	16.41	62.6	152.7	194.5	63.0	30.049	66.4	3 0	10.30	49.0	144.6	183.4	54.0	30.307	36.0
2 0			152.7	193.8	63.2	30.045	66.2	5 0	9.28	48.0	143.8	178.0	58.0	30.286	37.0
2 8	16.40	63.2	151.5	194.9	63.6	30.069	66.1	6 0	9.20	48.0	143.0	174.5	49.5	30.257	38.0
3 0	17.00	66.0	154.9	197.5	66.5	30.081	68.0	7 0	9.00	48.5	140.7	175.0	50.0	30.253	39.0
5 0	18.11	68.6	142.5	204.1	71.0	30.115	69.1	10 0	9.41	50.5	150.0	177.4	50.0	30.236	43.0
6 0	17.30	69.0	145.3	196.7	72.0	30.107	67.0	12 0	9.33	51.5	149.0	176.5	49.3	30.460	41.0
9 0	17.15	67.0	148.7	190.0	70.0	30.099	63.0	14 0	9.15	46.5	149.0	175.6	46.9	30.226	34.5
12 0	11.43	62.5	150.5	188.4	64.5	30.082	57.5	15 0	9.11	47.0	150.1	174.9	45.3	30.226	33.5
13 0	13.44	61.5	153.0	192.9	63.0	30.105	55.5	16 0	9.01	47.0	150.5	179.6	47.7	30.214	32.8
14 0	11.24	61.5	158.0	193.7	61.8	30.130	57.2	17 0	8.42	46.5	152.0	182.7	54.4	30.209	32.0
15 0	11.48	62.1	153.1	190.8	60.8	30.143	54.0	18 0	8.37	45.9	150.0	183.5	55.4	30.201	32.0
16 0	15.38	63.0	153.1	186.4	60.0	30.140	52.0	May 21.							
17 0	16.49	62.0	151.5	188.7	58.7	30.143	51.5	24 0	9.22	47.0	155.0	176.9	42.0	30.202	40.4
18 0	15.19	61.0	153.8	188.1	57.0	30.148	52.0	1 0	9.08	46.0	154.5	180.4	49.6	30.230	45.0
May 18.								1 52	11.44	54.6	155.4	184.5	52.8	29.701	52.2
1 52	15.02	60.4	152.5	192.2	57.2	30.208	64.0	2 0	12.03	54.6	155.0	183.2	52.6	29.693	
2 0	15.25	60.6	152.0	190.3	57.7	30.195		2 8	12.01	54.7	155.1	184.9	52.8	29.689	52.9
2 8	15.30	60.8	151.7	190.3	58.1	30.185	64.5	7 0	13.22	57.3	140.5	178.0	56.5	29.752	57.3
4 0	16.44	65.2	146.0	195.9	66.0	30.165	71.0	9 0	13.37	58.4	144.8	178.7	57.8	29.706	57.5
5 0	17.38	67.0	146.0	196.2	69.4	30.156	73.2	11 0	14.03	59.8	149.0	184.0	58.5	29.790	54.5
6 0	18.26	69.0	145.5	195.5	72.0	30.133	75.0	12 0	14.15	59.5	150.5	184.0	58.5	29.831	52.0
9 0	20.37	73.5	146.5	193.0	74.5	30.003	74.0	13 0	14.45	59.6	150.0	182.0	57.5	29.853	49.5
10 0	19.41	74.0	147.5	196.3	74.5	30.047	72.0	13 52	12.24	56.5	148.2	182.0	54.0	29.891	44.5
11 0	19.36	73.5	146.5	193.0	73.2	30.009	69.0	14 0	12.20	56.5	149.4	178.8	54.0	29.719	
12 0	18.27	71.5	150.0	193.2	70.5	30.001	65.3	14 8	12.48	56.5	150.5	180.2	54.0	29.878	44.0
13 0	17.33	69.0	149.5	192.3	67.5	30.022	59.8	16 0	12.00	54.8	150.4	179.9	52.0	29.831	42.5
14 0	18.00	67.8	151.6	190.4	65.4	30.056	55.2	17 0	11.30	54.0	150.4	179.5	52.0	29.944	41.0
15 0	17.37	66.0	155.2	186.4	64.0	30.050	54.0	18 0	11.20	52.5	150.2	181.6	56.0	29.929	40.0
16 0	17.18	65.0	153.4	188.5	62.8	30.063	52.0	19 0	11.20	52.5	150.5	184.2	60.0	29.961	42.0
17 0	16.17	64.0	151.8	188.0	61.0	30.045	49.2	20 0	11.10		153.2	185.0	61.0	29.953	43.5
18 0	15.07	62.0	151.3	184.2	59.0	30.054	50.0	21 0	11.05	52.1	152.0	186.0	62.7	29.966	41.7
21 0	14.40	60.0	153.4	183.0	57.0	29.971	53.0	22 0	10.42	51.8	153.5	184.7	64.8	29.965	41.8
22 0	14.26	60.0	153.7	183.9	57.0	29.963	52.7	23 0	11.00	52.0	160.0	186.8	67.0	30.001	42.2
23 0	14.26	60.5	153.7	185.0	57.0	29.970	55.7	May 24.							
May 19.								1 52	14.13	57.8	160.7	191.0	64.5	29.981	55.8
24 0	15.18	61.0	150.8	187.7	57.0	29.978	59.0	2 0	14.22	58.0	161.2	190.9	64.7	29.985	
1 0	16.16	61.5	149.4	190.2	59.0	29.961	64.0	2 8	14.14	58.0	160.5	190.6	64.2	29.985	57.0

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
3 0	+14 33	59.0	155.2	191 3	63.8	29.973	59.0	18 0	+15.29	61.0	153.0	185 0	61.0	29.845	47.0
4 0	14.33	59.0	149.4	193.0	63.8	29.962	57.5	19 0	15.23	61 0	150 5	186.5	63 0	29.831	46.0
5 0	14.42	59.5	141 0	192 5	64.5	29.952	59.4	20 0	14.42	60.5	150.5	186.9	63.2	29.858	45.6
6 0	14.30	60.0	140.0	190 0	64.4	29.855	58.8	21 0	14.31	60 3	152.0	186 6	62.9	29.825	47.2
7 0	14.38	59.5	140.5	186.4	65 0	29.942	59.5	22 0	14.27	60 2	152 2	187.1	63.2	29.898	50.0
8 0	14.32	60.5	142.4	184.7	64.4	29.891	61.4	23 0	14.33	60.5	154.6	187.5	64.0	29.931	51.0
9 0	15.10	62.0	145.0	182.2	63.0	29.874	60.7	May 27.							
10 0	15.18	62.5	146.0	181.5	62.5	29.854	60.5	24 0	14.39	60.2	158.4	186 0	63.4	29.917	53.0
11 0	14.31	61 0	147 0	181.6	61.0	29.848	58.0	1 0	14.13	59.3	159.6	187.0	63.5	29.904	54.8
12 0	14.41	61.0	148 5	182.7	60.0	29.866	56 0	3 0	14.31	59.3	152 5	189.3	62.5	29.863	57.2
13 0	14.17	59.5	150.1	183.5	58.7	29.870	53.5	4 0	15.05	60 0	146.4	190.5	62.0	29.864	57.5
14 0	14.39	59.0	150 6	182 0	58 5	29.874	53.5	5 0	15.05	60.0	143.2	189.3	62.0	29.845	58.2
16 0	14.15	59.5	151 8	181.0	58.5	29.852	51.0	6 0	15.18	60.5	141.0	185.9	62.0	29.843	57.5
17 0	14.29	59.5	154.0	181.2	59.5	29.848	50.2	7 0	15.05	59.8	143.3	183.6	62.0	29.821	57.0
18 0	14.40	58.8	155.8	184 6	61.4	29.805	50.0	8 0	15.49	59.3	144.0	183.2	61.5	29.778	54.3
19 0	14.05	58.6	151.0	185.8	54 5	29.769	49.8	9 0	14.24	58.8	147.0	182.0	61.0	29.784	52.2
20 0	14.48	57 6	151 6	186 3	64.5	29.785	50.2	Term day omitted.							
21 0	13.33	57.5	153.0	189.7	66.5	29.756	50.5	May 30.							
22 0	13.24	57.3	154.0	189.2	67.5	29.772	50.5	24 0	12.44	53.5	156.0	177.4	50.0	29.495	48.0
23 0	13.25	57.3	156.7	189.4	69.0	29.757	51.0	1 52	12.10	53.6	155.5	181.0	50 6	29.462	49.2
May 25.								2 0	12.06	53.7	153.3	181 2	50.7		
24 0	13.03	55 7	160.0	190 4	70.5	29.740	52.5	2 8	11.48	53.5	154.7	181.1	51.5	29.442	49.0
1 52	12.05	57.3	156.9	193.9	69.5	29.733	54.8	3 0	12.19	53.5	152.7	183.0	51.5	29.490	49.5
2 0	12.21	57.3	155.9	194 3	69.5	29.735		4 0	12.38	54.0	149 5	181.3	52 0	29.446	49.6
2 8	12.25	57.5	155.2	193.1	69 0	29.741	54.4	5 0	13.31	54.4	145.4	181.4	52.6	29.452	50.4
4 0	14.20	60.0	149 0	193.8	67.5	29.720	59.0	6 0	12.42	55.5	144.1	182.2	53.8	29.440	52.5
5 0	15.02	60.5	145.0	192.0	67.0	29.693	64.0	7 0	13.03	55.5	143.6	183 6	54.5	29.423	52.3
7 0	17.25	66.3	143.2	189 8	72.0	29.648	67.0	8 0	13.03	56.2	146.0	181 5	55.0	29.423	54.0
8 0	18.45	67.5	143.5	192.2	74.0	29.628	68 0	9 0	12.30	56.5	146.0	181 0	55.0	29.397	53.2
10 0	17.03	67.7	149.3	190 0	72.8	29.643	65.0	11 0	12.24	56.3	149.0	180 0	54.5	29.402	52.0
11 0	16.23	66.8	148.5	191.4	71.9	29.651	64.1	12 8	12.32	56.4	150.0	182.0	54 0	29.439	53.5
12 0	16.11	65.6	150.2	186.2	70 0	29.673	61.3	13 0	13.05	56.0	149.0	181 5	54.5	29.442	52.5
13 0	16.11	65.2	153.6	190.2	68.5	29.658	58.2	14 0	11.02	57.0	148.0	182 0	55.0	29.465	53.0
13 52	22.19	64.8	158 7	190.9	66 0	29.625	54.0	15 0	13.02		149.0	182 0	55.0	29.487	52.0
14 0	24.18	63.5	157 8	190.0	65.0	29.623		16 0	13.46	56.0	149 5	182.7	55.0	29.470	52.0
14 8	31.14	63.0	157.7	189.5		29.631	53.0	17 0	13.30	56 0	149.3	183.7	56.7	29.470	51.6
15 0	31.15	62.0	153.5	188.5	62.0	29.754	53.0	18 0	13.01	56.0	149.6	184.0	59.0	29.482	50.0
16 0	15.05	59.0	153.5	186.1	61.0	29.750	50.0	19 0	13.02	55.7	149.5	186.7	63.0	29.495	49.0
17 0	14.26	59.0	152.7	184.9	60.0	29.753	47.0	20 0	12.38	55.5	150.2	188.8	66.0	29.505	47.0
18 0	15.16	59.0	152.0	183.1	57.6	29.761	47.0	21 0	12.43	55.2	150 1	188.1	65.0	29.501	46.3
19 0	14.16	59.0	150 7	181.9	56.5	29.760	47.0	22 0	13.14	54.6	151.7	186.5	63.1	29.534	45.1
20 0	14.45	58.0	151.0	184.2	58 0	29.745	47.5	23 0	12.28	55.3	154.5	186.3	63.5	29.547	49.3
21 0	13.27	57.0	148.0	187.6	62.0	29.721	46 0	May 31.							
22 0	13.11	57.0	146.1	186.4	62.5	29.737	46 0	24 0	13.44	57.4	158.5	186.0	63.0	29.561	53.3
23 0	11.19	59.0	160.0	185.0	61.0	29.752	51.0	1 52	14.43	59.0	155.9	186.9	63.5	29.559	70.3
May 26.								2 0	15.03	59.2	157.3	187 6	63.5	29.574	68.1
24 0	16.26	62.5		184.0	60.3	29.785	56 6	2 8	14.45	59.5	157.4	187.6	63.4	29.583	67.3
1 0	15.37	61.0	158.0	186.9	60.8	29.715	58.5	4 0	16.41	63.5	149.7	191.5	67.0	29.598	61.0
1 52	15.43	62.4	154 8	187.7	61 8	29.775	61.3	6 0	17.40	66.5	145.0	191.8	68.0	29.607	64.0
2 0	16.15	62.6	155.2	188 0	61.9	29.775		7 0	18.00	67.0	144.0	190.5	68.5	29.584	65.0
2 8	16.05	62.6	154.8	188.2	61 8	29.777	62.0	8 0	18.00	68.0	145.0	190.5	69.0	29.567	66.2
3 0	16.10	63.5	152.0	192.5	63.5	29.767	63.5	9 0	18.06	69.0	146.6	189.6	69.0	29.569	66.0
4 0	17.10	65.0	146.9	197.7	65.0	29.768	66.0	10 0	18.26	69.0	149.5	188.0	69.0	29.579	65.8
5 0	18.25	67 0	143.0	195.7	67.5	29.738	68.0	11 0	18.19	69.0	151.5	189.0	68.5	29.610	64.0
7 0	19.47	69.3	139.5	192 3	70.0	29.725	69.5	12 0	17.39	67.5	151.2	187.5	66 8	29.634	61.0
8 0	19.13	70 6	141 5	188 5	70.5	29.720	70.0	13 0	17.34	66.0	151.2	185.0	65.0	29.689	55.9
9 0	19.04	70 6	143.5	183.7	70.5	29.741	69.5	1 0	16.28	64.0	151.5	185 7	62 6	29.704	52.0
10 0	17.34	70.5	144.8	186 0	69.6	29.734	68 0	15 0	15.38	61.5	152.2	184.3	60.0	29.730	49.2
11 0	17.47	69.4	148 0	188.1	69.1	29.740	66.7	16 0	15.16	61 0	152.5	184.2	59.5	29.742	48.0
12 0	17.47	69 0	147 8	190.2	68.3	29.767	65.7	17 0	14.42	60 0	151.4	183.7	57.5	29.759	46.5
14 0	17.36	66.5	150.0	188.4	65.5	29.841	56.2	18 0	14.10	57.5	152.0	184.3	58.4	29.797	44.4
16 0	16.48	62 0	155.3	182.9	60.4	29.874	50.0	19 0	13.38	56.5	152.4	184.0	58.5	29.809	44.2
17 0	15.17	62 0	154.7	182.0	60.0	29.829	47.0	20 0	14.11	55.5	151.4	185.0	55.0	29.831	47.0

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
21 0	+12 42	59.5	151.8	185.6	55.8	29.814	46.0	8 0	+20.03	71.8	143.0	198.0	75.0	29.999	71.0
22 0	12 15	54.5	152.8	185.5	61.3	29.837	45.0	9 0	20.40	72.0	145.0	197.0	74.5	30.009	70.0
23 0	11.31	55.0	156.5	184.7	60.8	29.883	49.5	10 0	19.28	74.0	152.0	195.0	73.5	30.088	70.0
Jun. 1.								11 0	18.37	71.0	153.0	190.0	71.6	29.869	67.0
24 0	15.13	59.8	158.9	183.3	60.8	29.907	54.4	12 0	18.07	69.0	154.5	188.0	69.0	29.983	62.5
1 0	15.06	58.0	159.0	185.0	61.2	29.915	58.2	13 0	17.19	66.0	152.5	185.5	67.0	29.994	57.0
1 52	15.16	59.2	157.0	187.3	62.7	29.915	61.5	14 0	17.25	66.0	153.1	187.4	65.4	30.006	51.0
2 0	15.20	59.5	156.3	187.6	62.6	29.915		15 0	16.42	63.5	153.2	185.6	63.5	30.009	49.0
2 8	15.22	59.5	155.9	187.7	62.5	29.918	61.9	16 0	16.24	62.0	153.2	185.5	61.5	30.008	46.5
3 0	16.04	61.7	153.1	188.9	62.5	29.913	62.0	17 0	15.45	60.5	153.7	183.0	59.3	29.994	45.0
4 0	16.36	63.5	148.8	189.7	64.0	29.911	63.9	18 0	15.06	59.5	153.5	184.0	58.0	29.979	44.0
5 0	18.08	65.0	145.5	191.0	65.0	29.929	65.5	19 0	15.42	57.5	153.2	183.7	58.0	29.971	42.0
6 0	17.30	66.5	143.0	192.9	68.3	29.930	67.0	20 0	14.14	56.5	152.0	186.0	60.0	29.958	41.0
7 0	17.33	67.5	142.0	191.4	69.0	29.917	67.2	21 0	14.00	55.5	152.2	188.0	63.0	29.929	40.7
8 0	17.48	68.8	143.5	190.5	70.0	29.878	68.8	22 0	13.13	54.0	151.0	188.0	65.0	29.939	40.2
9 0	17.20	69.5	144.6	187.0	70.0	29.892	68.2	23 0	10.31	55.8	160.0	187.2	64.8	29.939	46.0
10 0	17.02	69.0	146.0	191.2	69.4	29.891	67.0	Jun. 4.							
11 0	17.44	68.0	150.0	189.0	68.2	29.909	65.4	24 0	15.30	61.0	162.0	187.2	64.0	29.948	54.5
12 0	16.24	67.0	149.0	186.0	66.5	29.947	63.2	1 0	15.28	59.0	162.8	187.0	63.8	29.964	59.0
13 0	16.28	65.0	151.5	185.0	65.0	29.983	58.0	1 52	15.46	60.5	160.5	188.2	64.5	29.935	63.0
14 0	16.34	64.5	150.2	184.4	63.5	30.007	54.0	2 0	15.46	61.0	160.0	189.0	64.9		63.2
15 0	16.05	63.0	150.5	183.3	61.6	30.021	50.0	2 8	16.10	61.4	160.0	189.9	65.0	29.932	64.4
16 0	15.44	61.2	152.5	185.9	60.5	30.009	47.2	Jun. 6.							
17 0	14.15	60.0	167.0	188.5	61.4	30.049	45.0	1 52	19.12	70.2	158.2	198.2	67.6	29.716	66.5
18 0	13.24	59.0	154.0	187.0	61.5	30.048	44.0	2 0	19.08	70.5	158.0	198.2	67.8	29.704	
19 0	14.30	57.5	163.5	190.0	62.0	30.058	43.5	2 8	19.15	70.4	158.0	198.5	67.9	29.697	68.2
20 0	14.40	56.0	156.5	191.5	62.0	30.063	44.0	Jun. 7.							
21 0	14.19	55.0	155.0	187.7	61.0	30.028	41.5	1 52	13.03	55.4	156.2	183.9	48.6	30.212	55.1
22 0	13.39	53.5	157.9	186.0	60.0	30.059	41.0	2 0	13.23	55.5	156.0	184.1	48.7	30.191	
23 0	10.21	55.0	159.2	182.2	58.0	30.080	47.5	2 8	13.05	55.5	155.9	184.7	49.2	30.201	55.3
Jun. 2.								7 0	15.12	62.2	141.7	188.5	62.7	30.175	62.0
24 0	15.18	60.0	160.5	182.7	57.3	30.123	52.3	8 0	15.25	63.0	144.0	188.9	62.9	30.156	64.2
1 0	15.16	58.0	157.0	186.0	58.0	30.126	58.0	10 0	15.26	63.8	147.0	187.0	63.0	30.151	62.8
1 52	15.48	59.5	158.7	191.2	59.7	30.129	64.0	11 0	15.28	63.8	149.0	191.0	63.0	30.280	62.8
2 0	16.09	60.0	158.0	192.0	60.0	30.129		12 0	15.00	63.5	149.0	192.5	63.0	30.228	60.5
2 8	16.16	60.2	157.8	191.3	60.2	30.136	65.1	13 0	9.42	62.5	147.0	188.7	62.0	30.139	56.0
3 0	17.24	63.2	144.5	190.3	63.6	30.122	68.4	14 0	9.25	59.0	150.0	185.3	60.0	30.148	51.0
4 0	16.45	65.5	145.0	188.0	67.2	30.125	70.0	15 0	vibrating 55.0	151.0	185.5	58.0	30.339	47.2	
7 0	19.01	70.0	139.5	192.6	73.0	30.017	69.7	16 0	12.20	55.8	152.0	184.9	56.8	30.360	46.0
8 0	20.36	70.3	139.6	192.0	72.7	30.070	69.3	17 0	13.06	55.5	154.0	188.5	57.2	30.372	45.0
9 0	20.23	71.0	143.0	190.0	72.5	30.019	69.1	18 0	14.46	54.8	154.0	186.5	57.7	30.352	43.5
11 0	19.11	70.5	149.7	190.2	69.8	30.005	67.0	20 0	12.37	53.0	150.0	191.8	61.0	30.365	40.8
12 0	18.38	69.0	151.5	188.0	68.0	30.020	62.0	21 0	12.37	53.5	148.7	189.2	60.0	30.361	40.1
13 0	17.48	67.0	152.5	185.5	66.5	30.069	58.5	22 0	12.09	53.0	145.0	189.0	60.0	30.382	39.3
14 0	19.03	65.5	160.8	187.3	65.4	30.080	54.2	23 0	8.32	56.0	154.1	190.5	62.5	30.417	47.0
15 0	18.30	64.5	163.9	185.0	64.0	30.084	52.0	Jun. 8.							
16 0	17.18	63.5	157.1	189.0	65.5	30.089	50.5	24 0	13.48	58.6	156.1	192.2	64.1	30.389	51.7
17 0	17.03	63.5	150.0	190.0	66.1	30.090	48.8	1 52	14.45	58.6	157.4	194.8	65.2	30.447	62.0
18 0	17.03	63.5	148.0	192.0	68.0	30.094	47.0	2 0	14.44	59.0	156.7	195.0	65.2	30.455	
19 0	17.03	62.5	151.0	191.0	68.0	30.094	45.5	2 8	15.09	59.1	156.6	195.8	65.3	30.446	62.6
20 0	16.11	62.4	152.2	190.7	68.5	30.060	44.4	3 0	15.34	61.5	152.0	194.5	65.0	30.455	63.6
21 0	15.18	59.6	153.2	190.9	68.0	30.066	42.5	4 0	15.10	63.0	144.0	193.4		30.450	64.7
22 0	14.07	57.8	156.8	185.7	65.5	30.073	41.2	5 0	15.36	64.5	138.0	195.4	65.7	30.431	65.8
23 0	11.06	57.8	160.0	184.0	63.0	30.082	46.6	6 0	17.30	65.3	139.5	191.5	65.0	30.400	65.0
Jun. 3.								7 0	17.34	65.5	141.2	190.0	65.0	30.391	62.5
24 0	17.17	63.5	161.2	184.8	61.5	30.112	54.3	8 0	16.20	65.5	143.3	184.5	63.8	30.372	60.0
1 0	16.49	61.2	160.7	190.0	61.0	30.107	60.5	13 52	14.14	59.0	150.4	186.3	57.0	30.359	62.8
1 52	17.13	62.7	157.9	192.2	62.3	30.107	65.4	14 0	13.25	59.0	149.7	188.5	57.0	30.363	52.5
2 0	17.17	63.0	155.6	192.8	62.7	30.099		14 8	13.44	59.0	149.9	188.2	57.0	30.370	52.3
2 8	17.23	63.2	155.0	193.8	62.9	30.095	65.7	15 0	13.40	58.7	152.3	187.7	57.0	30.373	51.0
3 0	18.17	65.0	152.5	198.0	65.2	30.075	69.0	16 0	14.25	58.0	156.0	183.7	56.5	30.349	50.8
4 0	19.01	67.0	146.0	199.0	68.0	30.053	71.0	17 0	13.47	57.5	155.7	186.0	56.0	30.332	50.2
6 0	20.05	69.8	141.3	197.2	72.8	30.052	71.0	18 0	13.25	57.5	154.9	186.2	55.0	30.294	51.5

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
19 0	+13.25	57.5	151.6	188.0	56.0	30.267	51.5	3 0	+19.15	69.5	165.0	185.2	68.0	29.986	69.0
20 0	13.26	57.5	154.7	187.1	57.0	30.264	50.0	4 0	20.16	71.5	151.3	196.6	70.8	29.957	73.2
21 0	12.25	57.0	153.7	182.0	58.0	30.226	50.3	5 0	21.15	73.5	149.8	197.0	72.8	29.938	74.5
23 0	13.25	57.0	146.5	187.0	59.0	30.163	52.0	6 0	21.27	74.0	147.1	197.7	74.0	29.914	73.4
Jun. 9								7 0	22.12	75.5	146.2	195.6	74.0	29.890	76.0
24 0	12.00	56.5	146.7	187.2	59.0	30.137	53.0	9 0	22.07	75.5	149.0	197.0	74.5	29.938	73.5
1 0	13.38	56.5	150.5	185.0	55.0	30.112		10 0	21.43	74.0	149.0	195.5	74.0	29.907	69.0
1 52	13.04	56.7	164.1	193.7	58.4	30.068	55.0	11 0	20.21	73.0	149.0	195.5	73.0	29.981	69.8
2 0	12.49	56.7	155.3	189.9	58.4	30.063		12 0	20.00	72.3	149.0	196.0	72.5	29.948	69.8
2 8	12.41	56.7	156.8	189.2	58.6	30.036	55.0	13 0	19.47	71.6	151.9	195.4	72.0	29.954	68.0
7 0	15.10	60.5	145.0	187.3	61.0	29.849	60.3	13 52	20.02	71.5	155.0	193.1	71.0	29.954	68.0
12 0	14.48	64.5	151.0	191.5	65.3	29.745	66.0	14 0	19.39	71.5	154.0	193.3	71.0		
23 0	15.00	63.5	160.0	189.0	62.0	29.424	62.0	14 8	20.12	71.5	154.0	193.5	71.0	29.974	68.0
Jun. 10.								15 0	19.11	70.7	151.9	194.0	71.0	29.972	67.0
24 0	15.36	63.5	162.0	185.3	62.0	29.596	64.6	16 0	20.02	70.0	148.5	192.8	70.2	29.966	65.0
2 0	16.41	65.0	165.7	187.5	64.2	29.588	67.0	17 0	20.26	70.5	149.2	195.5	70.0	29.953	65.0
4 0	18.00	67.2	159.0	196.4	67.0	29.590	68.0	18 0	19.39	70.5	153.9	195.0	68.6	29.952	64.7
6 0	18.40	68.0	145.5	195.0	68.0	29.543	69.5	19 0	19.40	70.2	151.9	193.7	68.7	29.928	64.8
8 0	19.44	71.6	141.2	195.0	72.6	29.492	74.9	20 0	19.40	69.5	143.8	195.9	68.2	29.883	63.0
12 0	13.08	56.5	161.5	183.5	55.0	29.655	47.0	21 0	19.37	69.5	149.4	191.9	67.5	29.897	62.5
13 0	13.15	57.0	159.5	182.0	54.0	29.649	45.0	22 0	19.10	68.8	154.6	191.7	67.0	29.874	61.0
Jun. 13.								23 0	18.39	68.2	158.5	192.2	66.2	29.853	60.0
1 52	15.02	59.4	155.7	193.2	55.0	30.001	65.7	Jun. 16.							
2 0	15.02	59.6	153.0	191.8	55.5	29.988		1 0	18.26	67.0	158.4	194.0	65.2	29.765	65.2
2 8	15.14	60.0	153.2	192.4	56.0	29.995	66.8	3 0	18.43	67.6	153.5	195.6	66.8	29.767	67.8
13 0	14.43	67.5		197.6	66.7	29.967	63.0	4 15	19.20	69.0	148.5	196.0	68.0	29.748	69.2
15 0	16.00	64.5	153.8	193.7	65.0	29.987	60.0	5 0	19.31	69.5	148.0	195.8	68.6	29.756	69.3
16 0	16.02	66.5	158.5	194.2	64.6	29.974	60.6	6 0	19.44	70.0	148.8	194.3	70.0	29.724	70.2
17 0	17.06	66.0	157.0	187.2	64.5	29.890	60.0	7 0	20.19	71.2	150.4	191.7	71.3	29.719	73.0
18 0	17.26	66.0	154.0	192.0	64.7	29.767	60.3	8 0	21.45	72.5	151.8	191.8	73.0	29.718	75.0
19 0	22.36	66.0	129.0	197.9	67.4	29.951	60.5	9 0	21.09	74.0	153.7	192.9	74.6	29.708	75.2
21 0	19.11	66.0	155.0	194.0	71.8	29.928	61.0	10 0	21.09	74.6	153.3	195.3	74.5	29.710	75.2
22 0	18.32	66.0	150.6	197.2	71.0	29.931	61.6	11 0	21.25	75.0	151.9	197.1	74.9	29.732	74.7
23 0	19.41	66.0	149.0	203.0	70.6	29.933	62.0	12 0	21.25	74.6	151.0	198.2	75.6	29.726	73.0
Jun. 14.								13 0	21.13	74.5	151.2	198.1	75.0	29.740	71.8
1 0	18.41	66.0	147.5	201.7	69.5	29.995	64.8	16 0	18.08	69.0	151.2	191.5	69.0	29.743	63.5
1 52	19.14	66.9	156.0	194.0	69.0	29.991	65.1	17 0	19.43	69.5	151.9	193.5	68.5	29.776	63.2
2 0	19.20	66.8	156.2	194.3	68.9	29.997		18 0	18.36	69.0	152.8	193.0	68.0	29.794	63.0
2 8	18.47	66.9	156.6	195.0	68.8	29.993	65.4	19 0	18.43	69.0	153.5	193.0	68.0	29.764	62.5
3 0	13.32	68.5	158.0	198.0	69.0	30.007	68.0	20 0	18.30	68.5	154.5	191.9	67.5	29.778	62.5
4 0	19.15	69.0	153.5	201.6	70.0	30.020	69.5	21 0	18.20	68.0	155.4	193.0	67.0	29.783	61.8
5 0	19.33	70.8	150.8	204.1	72.2	30.018	73.0	22 0	18.48	68.0	155.0	192.3	66.5	29.696	62.4
6 0	19.41	72.0	145.0	205.0	73.8	30.026	74.5	23 0	18.03	67.5	157.0	192.5		29.767	64.0
7 5	20.01	73.8	149.0	196.5	74.2	30.029	76.2	Jun. 17.							
9 0	20.44	75.0	144.0	200.6	75.0	30.001	72.5	1 0	19.22	69.5		197.0	69.5	29.797	71.2
10 0	18.10	75.0	155.0	199.5	74.5	29.969	69.5	3 0	22.28	75.3	156.0	202.5	74.0	29.755	78.0
11 0	18.16	71.7	149.3	194.8	73.3	29.999	68.0	4 0	23.23	76.8	152.0	202.2	76.8	29.746	79.5
12 0	18.33	72.0	150.0	195.8	72.6	30.021	71.0	6 0	24.00	80.5	148.0	202.2	81.5	29.792	81.5
13 0	19.11	71.8	150.8	196.0	72.3	30.017	68.3	7 0	24.00	81.3	148.8	201.4	82.2	29.775	83.0
13 52			152.0	194.0	71.0	30.035	66.0	8 0	23.33	82.0	149.3	200.3	82.5	29.772	81.8
14 0	19.05	71.5	152.0	194.0	71.0	30.021	64.0	9 0	24.09	81.7	149.8	199.9	82.5	29.783	80.0
14 8	19.22	71.5	153.0	194.2	71.0	30.013	64.0	10 0	24.00	81.3	151.5	199.0	82.0	29.765	78.5
15 0	20.01	70.0	158.5	190.0	64.2	30.027	65.0	11 0	22.22	80.5	152.5	199.7	81.5	29.779	79.5
16 0	18.22	68.5	154.0	194.3	68.0	30.031	63.5	13 52	20.46	76.0	152.5	197.2	77.0	29.819	70.5
17 0	20.12	69.5	146.5	197.0	68.5	30.032	63.5	14 0	20.46	76.5	153.0	197.2	76.0		
18 0	24.20	69.5	151.0	198.2	68.3	30.002	63.5	14 8	19.25	76.5	154.6	199.0	75.5	29.823	70.0
19 0	21.00	69.3	158.0	195.0	68.0	30.010	63.0	15 0	20.30	75.2	154.4	196.0	69.3	29.827	68.0
20 0	19.29	68.7	159.6	194.5	67.5	29.980	62.8	16 0	20.19	72.5	153.1	196.2	73.0	29.829	68.0
21 0	19.45	68.6	146.0	197.3	67.0	29.932	62.8	17 0	20.24	72.0	154.5	195.2	72.0	29.836	66.5
22 0	19.22	68.4	149.9	192.4	66.6	29.928	61.8	Jun. 21.							
23 0	19.20	68.0	158.2	193.7	66.2	29.929	61.5	2 0	15.20	66.0	159.8	191.5	61.0	29.935	67.1
Jun. 15.								3 0	17.08	67.5	157.5	195.0	64.0	29.931	70.0
1 0	19.42	68.0	155.7	193.6	66.0	29.987	66.0	4 0	vibrating	72.0	152.0	198.6	68.2	29.938	72.2

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
5 0	+19.25	70.5	147.1	198.0	71.1	29.963	73.0	13 0	+15.34	65.0	155.5	185.8	60.0	29.805	54.7
6 0	17.05	70.3	146.0	197.0	77.0	30.287	79.2	14 0	12.02	62.0	163.5	187.0	57.0	29.803	59.0
8 0	17.25	76.0	147.0	197.0	78.5	30.184	78.0	Jun. 28.							
9 0	20.35	77.0	149.0	198.0	79.0	29.852	77.0	2 0	15.02	62.0	163.5	189.0	59.0	29.803	59.0
10 0	21.03	77.0	150.0	197.0	78.0	29.397	76.0	4 0	15.06	61.0	154.7	191.2	59.2	29.731	62.0
11 0	21.35	77.0	151.0	199.0	77.5	29.171		5 0	15.26	62.1	146.7	192.4	60.5	29.728	63.2
12 0	21.09	75.6	153.0	196.0	75.9	29.876	71.3	7 0	15.04	64.0	145.0	193.0	62.0	29.728	65.4
13 0	19.08	73.5	152.0	194.0	74.0	29.881	67.0	8 0	15.31	65.0	148.0	187.8	64.0	29.757	67.3
14 0	19.00	71.5	152.5	193.8	72.0	29.923	63.2	13 0	15.43	66.0	153.0	187.0	62.0	29.741	58.9
15 0	19.02	71.5	153.6	194.6	70.0	29.902	60.0	Jun. 29.							
16 0	18.20	70.0	153.2	191.7	68.5	29.889	58.5	1 0	16.40	66.0	161.5	188.0	63.0	29.749	71.0
17 0	18.10	69.0	153.4	190.5	67.0	29.894	57.5	5 0	19.45	74.5	145.0	200.0	76.0	29.731	79.0
18 0	17.22	68.0	154.2	189.8	66.0	29.881	56.0	6 0	22.35	77.0	143.0	200.0	80.0	29.809	80.5
19 0			155.1			29.859	54.0	8 0	21.32	77.8	145.8	197.0	80.0	29.745	78.1
20 0			155.8			29.837	53.0	11 0	21.12	77.0	149.7	198.3	79.0	29.797	74.5
21 0	15.48	63.5	156.3	187.6	61.8	29.815	52.0	13 0	20.27	76.0	153.5	193.6	76.0	29.877	67.8
22 0	15.11	63.0	157.6	186.0	60.7	29.848	52.0	14 0	21.43	72.5	143.4	188.4	74.0	29.894	61.0
23 0	vibrating		158.6	185.2	59.2	29.821	58.2	15 0	21.25	71.5	143.9	193.0	70.0	29.996	60.0
Jun. 22.								16 0	20.05	71.0	144.0	191.5	69.0	29.988	59.5
24 0	16.23	66.0	161.3	187.8	59.5	29.836	62.0	17 0	20.32	70.5	144.3	190.1	67.0	30.002	57.0
1 0	17.20	66.0	161.4	189.5	60.5	29.831	66.0	Jun. 30.							
3 0	18.32	70.0	153.0	197.1	68.0	29.706	76.0	24 0	18.30	72.0	161.6	187.6	59.5	30.045	65.3
4 0	vibrating		149.0	203.5	73.5	29.762	78.2	1 0	18.21	68.0	161.2	188.6	61.0	30.023	71.0
5 0	22.07	74.8	147.0	204.1	75.6	29.787	80.5	2 0	18.26	69.0	161.0	192.2	64.5	30.011	75.5
7 0	22.04	77.0	144.0	198.3	81.0	29.681	81.0	5 0	22.03	75.0	145.0	204.0	76.0	29.992	81.0
8 0	24.08	79.7	143.5	198.7	82.2	29.652	81.3	6 0	22.42	77.5	144.0	200.5	78.3	29.955	82.4
Jun. 23.	Term	day	omit	ted.				7 0	22.35	78.0	138.7	210.5	79.5	30.005	79.7
10 0	15.03	64.5	153.1	183.7	63.2	29.741	58.5	8 0	23.01	79.5	143.2	199.2	82.0	29.900	79.2
11 0	15.49	64.0	157.9	190.0	63.8	29.745	56.0	11 0	22.17	79.5	151.0	199.5	80.0	29.962	76.8
12 0	14.24	63.5	153.6	189.8	63.3	29.747	55.9	12 0	22.29	78.7	147.7	196.2	78.5	29.820	74.0
13 0	13.45	62.0	146.2	187.0	61.8	29.740	55.5	13 52	22.24	75.5	154.2	192.0	75.0	29.906	69.5
14 0	14.28	62.5	153.0	187.2	61.2	29.768	55.0	14 0	22.28	75.5	154.0	191.0	75.0	29.791	69.5
15 0	14.27	62.0	156.9	188.3	60.6	29.781	54.5	14 8	22.32	75.5	154.0	192.0	75.0	29.918	69.5
Jun. 24.								15 0	23.46	75.0	170.0	196.0	74.5	29.923	68.0
24 0	16.48	60.2	152.2	190.1	56.6	29.807	58.3	16 0	22.37	74.5	162.5	205.0	74.0	29.911	68.0
1 0	16.19	61.0	156.2	191.4	57.8	29.798	63.0	17 0	21.20	74.0	160.2	201.0	73.0	29.921	69.0
3 0	16.27	65.8	157.5	194.9	64.0	29.797	67.0	18 0	21.29	73.5	164.0	200.0	73.0	29.909	69.0
4 0	17.03	67.5	149.0	199.5	67.0	29.759	68.0	19 0	20.18	73.1	163.0	199.0	73.0	29.901	68.0
8 0	10.34	72.8	148.3	196.4	74.7	29.718	71.9	20 0	18.20	72.0	161.5	198.0	72.0	29.902	69.0
10 0	19.13	73.5	146.0	195.0	75.0	29.724	70.5	21 0	15.22	72.0	158.2	198.0	71.0	29.899	70.0
11 0	18.17	73.4	151.5	192.5	74.0	29.730	70.2	22 0	12.13	72.5	157.0	197.2	72.0	29.853	70.0
12 0	17.30	72.0	152.0	195.0	73.2	29.724	69.0	23 0	10.21	72.5	159.0	199.0	71.5	29.863	70.0
14 0	15.22	68.5	154.0	192.0	70.0	29.765	60.0	July 1.							
16 0	vibrating		158.0	192.0	65.5	29.804	57.4	24 0	9.49	73.0	158.5	200.8	72.0	29.889	72.0
17 0	16.03	65.0	160.5	195.9	65.0	29.802	55.0	1 0	17.46	73.0	162.6	198.2	72.5	29.886	74.0
18 0	18.00	65.0	155.0	195.0	64.5	29.794	55.0	2 0	23.44	79.5	140.0	205.5	82.0	29.879	84.5
19 0	16.25	64.5	154.7	191.5	66.5	29.791	55.0	July 5.							
20 0	15.32	63.5	155.6	191.2	66.0	29.822	49.0	3 0	17.21	73.5	158.5	212.6	73.8	29.852	74.5
21 0	15.15	62.5	155.0	193.0	65.4	29.807	53.0	4 0	18.33	75.0	156.3	212.3	75.0	29.852	77.0
23 0	13.10	65.5	152.6	196.5	67.0	29.831	58.6	5 0	19.11	76.5	153.1	212.8	76.2	29.848	78.2
Jun. 25.								9 0	19.34	73.8	149.0	205.9	78.5	29.805	77.2
24 0	18.20	72.0	157.5	192.2	66.5	29.881	63.5	10 0	19.08	78.0	149.3	203.9	76.5	29.792	76.3
Jun. 27.								11 0	18.26	77.3	150.6	202.6	76.2	29.746	74.0
1 0	17.01	68.0	160.0	193.7	64.5	29.732	63.0	12 0	18.04	75.5	150.5	202.5	75.5	29.786	72.3
2 8	18.48	69.7	154.8	194.5	66.5	29.756	62.8	13 0	17.31	74.0		203.5	74.5	29.807	70.5
4 0	17.48	68.5	133.7	190.1	67.0	29.756	60.0	13 52	16.22	73.0	152.2	204.8	72.0	29.864	67.8
5 0	17.17	67.5	145.0	192.0	63.5	29.772	59.0	14 0	16.22	73.0	153.0	202.2	73.9	29.869	
6 0	17.30	68.0	146.0	189.7	62.0	29.767	62.5	14 8	16.18	73.0	153.8	204.9	73.6	29.865	
7 0	17.35	68.5	144.2	189.0	63.0	29.790	62.5	15 0	16.30	74.0	159.0		72.6	29.786	66.0
8 0	17.28	68.5	147.4	185.0	62.9	29.784	61.0	July 6.							
9 0	17.47	68.5	147.0	186.5	62.0	29.768	60.7	24 0	16.10	70.7	161.8	200.9	70.0	29.827	70.0
11 0	17.00	67.5	151.1	185.9	60.3	29.804	58.0	1 0	16.31	71.8	159.0	203.3	70.8	29.845	73.0
								6 0	16.25	77.0	146.9	201.8	76.5	29.805	77.0

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
7 0	+18.37	76.5	145.6	201.7	76.0	29.798	75.0	8 0	+23.28	86.0	145.0	211.5	90.5	29.728	89.3
9 0	18.22	76.0	145.6	199.5	75.8	29.818	75.2	10 0	23.17	88.0	146.2	214.0	90.4	29.713	88.0
10 0	18.24	75.7	149.2	193.2	75.8	29.824	73.8	12 0	22.15	87.0	148.0	216.5	88.0	29.719	83.0
11 0	18.28	74.5	149.2	193.9	75.2	29.856	70.8	14 0	20.29	83.0	145.0	210.0	84.0	29.724	76.5
12 0	15.32	72.5	145.5	202.3	74.0	29.854	64.2	16 0	19.33	80.5	149.0	209.0	80.7	29.720	72.4
13 0	16.18	69.2	167.0	195.6	74.0	29.852	64.5	18 0	vibrating		149.7	207.0	77.0	29.593	71.5
13 52	18.35	69.2	159.0	212.0	72.5	29.875	64.5	20 0	"		150.2	204.7	74.8	29.722	69.1
14 0	16.29	69.5	149.2	209.1	72.2	29.863		22 0	"		152.0	204.8	73.0	29.762	68.0
14 8	18.12	71.0	147.9	209.3	71.8	29.868	64.8	July 14.							
15 0	16.01	70.5	150.0	204.5	70.0	29.888	64.2	24 0	19.07	79.0	156.1	204.0	72.5	29.719	74.0
16 0	16.39	70.0	171.7	204.4	69.5	29.936	63.6	2 0	19.06	78.5	157.8	209.5	76.0	29.791	79.0
17 0	16.28	70.5	170.3	205.1	69.0	29.967	63.0	4 0	20.44	82.0	149.6	206.8	82.0	29.761	83.2
18 0	15.44	69.0	169.4	202.3	69.2	29.965	62.5	6 0	23.06	85.5	142.6	218.0	87.0	29.718	87.2
19 0	15.01	68.5	170.5	203.5	68.0	29.967	62.8	8 0	23.12	88.0	141.3	214.8	89.4	29.715	89.0
20 0	18.14	68.0	144.9	202.6	67.0	29.965	61.0	10 0	23.12	88.0	145.0	212.0	87.8	29.681	85.3
21 0	17.45	67.0	153.5	203.0	66.5	29.971		12 0	21.20	85.0	148.0	209.6	84.0	29.707	78.0
July 7.								14 0	21.05	82.0	145.2	210.2	81.0	29.747	74.0
24 0	15.45	71.0	159.4	196.9	63.5	30.086	61.0	16 0	21.05	81.0	147.5	211.4	79.2	29.778	70.8
3 0	16.35	69.0	153.2	207.3	67.0	30.134	68.5	18 0	21.18	79.0	141.5	211.7	76.0	29.759	70.0
4 0	18.00	71.0	147.0	210.0	69.7	30.128	70.0	20 0	19.32	74.0	150.1	204.4	76.0	29.787	67.4
5 0	18.00	71.5	148.3	208.1	71.5	30.112	70.0	22 0	18.06	74.0	143.3	204.6	73.5	29.799	67.5
9 0	16.46	71.8	146.6	202.9	71.7	30.031	67.7	July 15.							
10 0	16.49	72.0	148.7	201.2	71.2	30.051	67.4	2 0	19.27	77.0	158.7	211.9	76.3	29.799	80.5
11 0	16.19	71.4	150.5	200.8	70.6	30.058	66.0	4 0	22.42	81.6	150.0	217.8	82.0	29.808	84.0
12 15	15.37	70.0	151.7	197.0	69.0	30.082	63.5	6 0	20.20	80.5	143.0	215.0	82.0	29.824	74.0
13 0	14.16	69.0	146.5	200.0	68.0	30.038	63.0	8 0	18.25	77.0	143.0	205.5	78.8	29.847	72.4
13 52	16.42	69.0	146.5	201.5	68.0	30.103	62.0	10 0	19.04	77.5	147.5	208.5	78.0	29.843	72.8
14 0	15.35	69.0	147.0	201.5	67.5	30.107	61.5	12 0	19.02	77.0	148.0	208.6	78.0	29.855	73.0
14 8	15.31	68.5	147.5	200.5	67.5	30.107	61.5	14 0	18.17	76.0	150.5	204.5	76.0	29.875	70.0
15 0	15.19	67.0	148.0	200.2	67.0	30.109	60.0	16 0	18.15	75.0	155.0	203.9	75.0	29.882	67.5
16 0	14.28	65.5	147.7	198.2	65.8	30.108	57.2	18 0	17.33	73.0	157.1	206.6	73.0	29.844	66.2
17 0	14.22	63.8	148.6	197.3	65.0	30.105	57.2	20 0	17.00	71.8	150.0	203.0	71.4	29.845	66.0
18 0	13.37	64.3	148.1	197.5	64.0	30.099	56.8	22 0	16.23	71.0	156.0	205.0	71.0	29.849	67.0
19 0	13.31	64.3	148.2	196.7	63.2	30.092	56.2	July 16.							
20 0	13.21	64.0	149.0	196.5	63.0	30.073	56.5	2 0	16.38	70.0	157.0	207.0	70.0	29.884	69.5
21 0	13.15	63.6	149.0	196.5	62.6	30.067	57.5	July 18.							
22 0	12.27	62.0	150.2	196.1	62.5	30.073	58.5	4 0	20.40	79.0	153.0	207.2	79.0	29.770	86.0
23 0	12.28	61.7	157.4	195.8	62.0	30.065	63.0	6 0	24.39	84.0	144.5	212.0	86.0	29.731	88.0
July 8.								8 0	23.42	87.0	147.2	211.0	88.6	29.675	89.0
24 0	13.12	62.8	160.8	196.6	62.2	30.075	63.0	10 0	23.36	78.0	151.1	209.0	87.0	29.726	84.0
1 0	13.20	63.5	160.0	198.0	62.7	30.072	63.0	12 0	22.05	84.0	150.2	206.0	83.6	29.729	78.0
3 20	14.23	65.2	155.2	204.0	64.5	30.048	67.5	14 0	20.29	80.0	154.0	204.5	79.0	29.781	71.0
4 15	15.33	67.0	150.0	206.0	66.5	30.044	71.0	16 0	20.10	76.5	155.7	209.2	75.7	29.813	68.5
5 0	16.19	68.5	147.4	206.0	68.0	30.039	71.0	18 0	vibrating		153.2	205.7	75.0	29.775	66.2
6 30	16.11	68.3	144.5	204.0	68.5	30.024	66.5	20 0	18.08	70.0	154.0	206.1	72.5	29.779	65.0
8 20	15.25	68.0	142.3	200.6	68.2	29.991	66.5	22 0	17.17	69.0	148.0	205.0	71.5	29.783	65.0
13 0	14.04	68.7	146.6	200.5	68.4	29.926	64.3	July 19.							
13 50	14.20	69.5	171.8	203.4	67.6	29.931	63.7	2 0	18.40	74.0	157.0	207.0	74.0	29.762	78.0
14 0	15.28	69.5	165.3	202.6	67.5			July 20.							
14 10	15.23	69.5	157.2	202.9	67.5	29.931	63.8	24 0	19.37	76.0	156.0	209.0	74.6	29.695	76.0
16 0	21.30	69.5	160.3	209.0	69.0	29.927	68.0	1 50	20.25	76.8	158.0	200.0	74.2	29.688	78.0
17 0	20.01	69.8	155.0	202.2	69.0	29.912	68.0	2 0	20.36	76.8	156.2	211.2	74.4	29.689	78.4
18 0	19.35	70.0	163.9	208.8	69.5	29.897	68.0	2 10	20.33	77.0	155.6	209.5	74.6	29.689	78.6
19 0	23.15	70.0	156.6	197.0	69.8	29.885	68.5	4 0	20.23	76.0	153.0	208.0	74.0	29.707	74.0
20 0	19.20	70.5	154.5	197.8	70.0	29.847	69.5	5 50	19.32	75.0	146.8	201.6	73.5	29.717	74.0
21 0	19.08	71.0	137.5	202.7	70.5	29.830	70.0	6 0	19.36	75.0	146.9	201.0	73.7	29.715	74.3
22 0	19.20	71.0	148.0	198.0	71.2	29.856	70.5	6 10	19.24	75.3	147.2	202.5	73.8	29.712	76.4
23 0	18.35	71.5	147.7	202.0	71.5	29.881	71.0	8 0	20.34	78.4	148.0	200.8	76.4	29.711	81.2
July 13.								Term	day	omit	ted.				
2 0	18.33	73.5	158.5	205.7	71.2	29.834	77.8	July 21.							
4 0	20.40	77.6	150.0	216.0	79.0	29.790	84.0	10 0	19.08	75.5	153.1	203.2	76.0	30.135	76.0
6 0	23.08	82.0	148.0	213.5	86.2	29.755	87.0	12 0	18.18	74.0	154.0	205.3	74.0	30.126	70.0

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
14 0	+17.12	70.0	138.5	201.3	70.0	30.153	61.5	21 50	+17.40	69.4	152.4	197.1	67.6	29.937	61.2
15 50	15.43	66.5	140.7	199.2	68.0	30.144	57.0	22 0	17.39	69.0	151.2	197.7	67.4	29.946	62.0
16 0	16.26	66.5	144.1	197.9	68.0	30.145	57.0	22 10	17.16	68.8	152.8	197.0	67.5	29.944	61.8
16 10	16.28	67.0	144.5	199.5	68.2	30.145	57.0	July 28.							
18 0	16.12	66.5	139.1	197.3	66.0	30.145	55.2	24 0	16.38	66.5	162.8	198.2	66.0	29.987	65.0
20 0	14.42	64.5	135.0	197.7	63.8	30.153	54.0	1 50	18.28	70.4	161.9	204.5	68.5	29.989	72.8
22 0	14.30	64.4	141.2	196.9	62.6	30.149	52.3	2 0	18.29	70.5	161.2	205.2	69.0	29.981	73.0
July 22.								2 10	18.33	71.0	159.8	206.0	69.2	29.978	73.0
23 50	15.17	66.5	151.0	196.1	61.4	30.147	59.0	July 29.							
24 0	15.27	66.0	148.3	195.7	61.4	30.156	60.0	1 50	17.37	67.5	166.5	196.4	66.0	30.073	71.4
0 10	15.24	65.4	149.5	195.6	61.4	30.168	61.0	2 0	17.34	67.6	168.0	198.0	66.4	30.059	71.3
2 0	16.05	66.5	159.0	206.0	65.0	30.132	71.0	2 10	17.45	68.0	169.0	198.8	67.0	30.059	71.8
July 25.								4 0	20.14	72.0	159.5	203.6	72.8	30.043	81.0
1 50	13.24	66.0	160.0	201.7	62.2	30.095	61.8	5 50	22.15	76.5	146.7	207.5	77.5	29.978	81.2
2 0	15.14	64.7	163.0	200.9	62.0	30.074	62.0	6 0	22.22	76.5	146.4	207.7	77.6	29.997	81.0
2 10	15.19	66.0	161.5	202.0	62.5	30.084	62.5	6 10	22.27	76.6	146.8	206.2	78.0	29.999	81.6
4 0	15.39	66.7	155.3	206.4	66.0	30.068	65.3	8 0	23.26	79.5	143.0	209.4	80.5	29.936	81.0
5 50	16.21	68.6	146.3	206.8	69.8	30.051	68.2	9 50	22.21	80.3	141.7	210.2	79.8	29.866	79.0
6 0	16.23	68.7	146.3	207.6	70.2	30.057	68.3	10 0	22.12	80.2	142.8	208.9	79.6	29.926	78.0
6 10	16.31	69.0	145.1	207.4	70.5	30.055	69.0	10 10	22.10	80.0	143.4	208.7	79.5	29.910	78.0
8 0	17.35	71.5	145.0	203.5	73.2	30.023	71.6	12 0	21.19	78.5	147.5	202.0	78.0	29.899	75.0
9 50	18.09	73.0	151.0	201.3	74.0	30.006	71.8	13 50	20.36	76.5	147.0	209.4	75.6	29.877	72.0
10 0	18.22	73.0	151.2	201.5	74.0	30.027	71.5	14 0	21.14	76.6	146.3	207.4	75.6	29.882	72.0
10 10	18.11	73.0	151.4	201.2	73.9	30.003	71.4	14 10	21.35	77.0	146.4	207.5	75.6	29.885	72.0
12 0	17.18	71.5	152.5	201.0	72.5	29.991	67.5	16 0	21.05	76.6	141.5	204.4	75.0	29.865	71.8
13 50	17.40	70.5	153.0	201.0	70.0	30.017	63.7	17 50	21.43	76.2	153.8	204.4	74.5	29.785	71.6
14 0	17.49	70.4	152.0	202.6	70.0	30.021	64.0	18 0	21.42	76.0	153.0	205.6	74.5	29.775	71.8
14 10	18.04	70.5	154.0	201.7	69.8	30.011	64.0	18 10	21.37	76.0	153.0	206.0	74.6	29.771	72.0
16 0	17.15	69.5	156.6	202.1	68.5	30.027	62.0	20 0	19.03	74.0	154.5	204.0	74.2	29.728	70.0
17 50	17.20	68.0	153.8	200.2	67.5	30.017	61.0	21 50	19.22	73.0	153.5	202.3	72.6	29.710	69.8
18 0	17.41	68.1	153.9	200.7	67.4	30.029	61.0	22 0	19.24	73.0	153.1	202.5	72.0	29.699	69.2
18 10	17.42	68.3	153.6	200.0	67.4	30.018	62.5	22 10	19.34	73.2	153.6	202.0	77.0	29.701	69.3
20 0	17.03	66.7	153.0	200.9	66.2	29.985	61.0	July 30.							
21 50	16.06	66.6	155.0	199.0	65.7	29.957	60.6	24 0	20.35	71.0	156.0	203.5	73.4	29.688	71.0
22 0	16.05	66.2	155.7	199.4	65.6	29.954	60.6	1 50	21.49	78.5	162.5	208.3	78.0	29.621	81.8
22 10	16.07	66.2	156.0	199.4	65.8	29.969	60.6	2 0	22.11	79.0	163.0	208.3	78.8	29.630	82.2
July 26.								2 10	22.28	79.5	163.6	210.0	79.0	29.626	83.0
24 0	15.26	65.5	159.0	198.9	64.8	30.000	61.7	Aug. 1.							
1 50	16.17	66.6	161.0	201.3	65.2	29.975	65.5	1 50	13.41	61.0	159.4	200.0	58.4	29.889	60.2
2 0	16.30	66.2	161.5	201.8	65.2	29.951	69.0	2 0	13.46	61.1	159.2	200.0	58.8	29.882	60.2
2 10	17.00	66.6	161.5	200.5	65.6	29.961	70.5	2 10	13.40	61.4	160.8	201.4	59.0	29.877	60.2
July 27.								4 0	14.25	63.7	152.2	201.2	63.3	29.885	64.1
1 50	21.13	75.5	163.5	206.2	75.0	29.804	79.0	5 50	16.02	66.5	145.7	199.2	67.6	29.880	65.5
2 0	21.19	76.0	163.5	207.0	75.5	29.778	79.6	6 0	16.16	66.7	145.3	200.1	68.0	29.886	66.0
2 10	21.27	76.5	162.5	207.6	75.8	29.761	80.0	6 10	16.19	66.9	145.0	199.5	68.1	29.876	65.0
4 0	24.00	81.6	149.7	211.0	82.6	29.738	85.8	8 0	16.25	69.5	144.7	198.2	70.1	29.854	68.2
5 50	25.21	85.8	143.5	215.6	87.9	29.693	88.4	9 50	16.31	69.4	148.6	200.2	70.0	29.864	66.7
6 0	25.27	86.0	143.0	216.0	88.0	29.724	88.8	10 0	16.24	69.3	149.8	198.4	70.0	29.863	66.5
6 10	25.32	86.4	143.0	216.6	88.5	29.747	89.0	10 10	16.09	69.2	150.2	198.5	69.8	29.869	66.3
8 0	24.27	86.5	142.2	212.9	89.0	29.733	80.0	12 0	15.28	67.6	148.2	196.3	67.7	29.894	63.0
9 50	22.32	82.5	147.0	204.6	84.0	29.726	79.8	13 50	15.02	66.3	146.2	198.6	65.6	29.954	56.6
10 0	22.28	82.5	147.0	205.4	84.0	29.737	80.0	14 0	15.04	66.2	146.5	197.4	65.3	29.938	56.4
10 10	22.23	82.4	148.2	205.0	83.8	29.744	79.2	14 10	15.11	66.0	147.2	197.7	65.1	29.955	56.0
12 0	22.28	81.5	152.0	206.0	82.5	29.803	77.0	16 0	14.37	64.4	151.7	200.7	63.2	29.972	52.5
13 50	21.35	79.0	149.0	205.0	79.5	29.848	71.2	17 50	14.03	62.3	149.9	195.9	61.5	29.981	50.2
14 0	21.30	78.5	149.3	204.4	79.0	29.851	70.6	18 0	14.13	62.2	151.6	196.3	61.0	29.983	50.2
14 10	21.28	78.5	149.5	204.3	79.0	29.849	70.2	18 10	13.44	62.0	152.5	196.2	61.0	29.981	50.4
16 0	20.40	76.2	149.7	203.2	76.5	29.881	68.2	20 0	12.30	59.3	153.1	195.4	58.8	29.990	47.2
17 50	19.05	72.5	150.4	202.1	74.0	29.877	67.0	21 50	12.19	58.0	154.6	196.2	57.0	30.026	46.0
18 0	19.00	72.6	150.9	201.7	73.4	29.873	66.0	22 0	12.14	58.0	155.6	191.2	57.2	30.026	46.0
18 10	19.26	72.9	151.4	201.2	73.3	29.887	67.0	22 10	12.02	58.0	155.4	191.4	57.0	30.020	46.0
20 0	18.30	71.2	151.5	198.5	70.0	29.922	62.4								

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
Aug. 2.								Aug. 8.							
24 0	+14.03	58.3	159.8	190.0	55.1	30.056	53.5	1 50	+16.06	68.3	155.2	210.0	67.1	29.867	67.3
1 50	12.32	60.0	159.0	197.6	58.2	30.052	59.0	2 0	16.14	68.5	155.4	210.4	67.4	29.885	67.6
2 0	12.38	60.2	158.8	198.5	58.6	30.055	59.8	2 10	16.35	68.6	155.1	210.0	67.5	29.857	68.0
2 10	12.48	60.5	157.4	199.5	57.2	30.055	60.8	4 0	17.36	70.6	148.7	208.8	69.8	29.853	71.6
Aug. 3.								5 50	17.29	71.3	143.0	204.8	70.6	29.864	71.2
1 50	13.20	60.0	158.2	200.3	59.0	30.143	67.0	6 0	17.26	71.3	143.0	204.6	70.4	29.854	71.2
2 0	13.28	60.5	158.0	201.0	59.5	30.139	67.8	6 10	17.24	71.4	143.1	204.2	70.7	29.854	71.6
2 10	13.44	61.0	157.0	201.8	60.0	30.158	68.5	8 0	17.20	72.2	146.2	200.8	71.6	29.844	71.6
4 0	16.47	67.6	145.8	207.0	68.6	30.151	74.2	9 50	17.15	72.5	153.1	198.6	71.8	29.836	71.7
5 50	19.00	72.0	140.6	208.5	75.0	30.150	76.2	10 0	17.08	72.6	153.4	198.2	71.9	29.832	71.3
6 0	19.04	72.5	140.3	208.4	75.5	30.142	76.8	10 10	17.03	72.7	153.6	198.4	71.8	29.829	71.3
6 10	19.12	72.8	141.0	208.0	76.0	30.139	77.0	14 0	17.00	71.0	145.9	209.5	70.6	29.884	66.8
8 0	20.04	76.5	145.5	206.3	78.0	30.113	78.2	16 0	17.19	72.0	143.6	206.7	70.2	29.881	66.2
9 50	19.46	76.6	150.2	205.5	76.3	30.103	73.8	18 0	17.15	69.5	143.1	205.6	68.9	29.903	60.2
10 0	19.38	76.5	150.4	205.0	76.2	30.111	73.0	20 0	17.09	68.8	136.2	204.5	67.5	29.926	65.5
10 10	19.27	76.0	150.9	204.2	76.0	30.110	72.2	21 50			147.9	203.3	67.4		
12 0	18.41	73.5	151.2	202.0	72.3	30.143	68.5	22 0	17.25	68.5	148.3	203.2	67.4	29.946	65.4
13 50	18.00	71.2	147.9	202.2	70.0	30.160	62.8	22 10	17.20	68.5	148.9	203.0	67.3	29.964	65.2
14 0	17.44	71.0	148.1	202.2	69.8	30.162	62.0	Aug. 9.							
14 10	17.48	71.0	148.7	202.0	69.7	30.170	62.0	24 0	16.07	68.0	161.7	203.2	66.8	29.982	67.2
16 0	17.16	68.7	151.4	202.5	68.0	30.184	60.0	1 50	16.47	69.0	161.8	208.4	68.0	29.999	70.8
17 50	16.19	66.7	148.8	200.2	66.0	30.148	58.5	2 0	16.45	69.2	161.5	207.8	68.1		
18 0	16.14	66.7	147.4	199.6	65.8	30.173	58.5	2 10	vibrating		160.7	207.3	68.4	30.004	71.8
18 10	16.08	66.5	148.5	198.8	65.5	30.174	58.0	Aug. 10.							
20 0	15.12	64.3	148.8	199.4	63.4	30.163	57.2	1 50	17.33	71.0	158.0	205.6	70.0	30.071	72.5
21 50	14.15	62.6	149.1	196.7	61.6	30.143	55.2	2 0	17.35	71.2	157.0	206.2	70.2	30.063	72.8
22 0	14.10	62.7	154.3	196.8	61.6	30.149	55.8	2 10	17.45	71.5	156.8	207.0	70.4	30.063	73.0
22 10	14.00	62.5	154.9	197.3	61.4	30.151	55.6	8 0	17.33	76.5	149.8	204.3	75.6	30.047	71.8
Aug. 4.								9 50	18.20	73.6	152.5	200.4	72.6	30.026	66.2
24 0	13.46	62.3	155.0	194.7	61.0	30.156	60.0	10 0	vibrating		152.0	202.4	72.4	30.020	66.2
1 50	14.27	63.5	156.6	203.0	62.2	30.169	60.2	10 10	"		152.0	202.0	72.3	30.034	66.2
2 0	14.34	63.5	155.8	203.5	62.5	30.175	60.8	12 0	17.03	70.5	155.2	203.7	70.6	30.009	66.0
2 10	14.42	64.0	154.8	205.0	63.0	30.158	61.4	13 50	16.06	69.0	151.8	203.0	69.0	30.048	65.0
Aug. 5.								14 0	16.44	69.0	151.5	202.7	69.0	30.040	65.0
1 50	14.18	61.5	161.8	203.5	60.5	30.122	59.8	14 10	16.17	69.2	151.0	203.2		30.046	65.0
2 0	14.11	61.6	161.0	205.3	60.5	30.124	59.2	16 0	16.20	69.0	151.9	204.0	68.3	30.052	65.0
2 10	14.08	61.7	159.9	205.2	60.6	30.125	59.3	17 50	18.05	69.0	158.0	203.0	68.0	30.072	64.7
4 0	14.13	62.6	150.6	203.8	61.3	30.122	61.7	18 0	17.38	69.0	156.5	204.3	68.0	30.070	64.8
5 50	14.18	62.8	142.9	203.0	61.8	30.100	61.2	18 10	17.32	69.0	156.1	205.8	68.0	30.052	64.8
6 0	14.25	62.8	143.2	203.0	62.0	30.101	61.3	20 0	16.28	67.5	157.0	203.0	67.0	30.049	64.0
6 10	14.28	63.0	143.5	202.0	62.0	30.103	61.6	21 50	15.20	66.5	158.0	200.0	66.0	30.047	64.0
8 0	15.12	64.5	146.0	200.0	64.0	30.094	64.0	22 0	15.18	66.2	157.7	200.0	66.0	30.049	64.0
9 50	16.11	66.6	150.2	199.2	66.0	30.071	67.0	22 10	15.14	66.4	158.0	200.0	66.0	30.049	64.0
10 0	16.15	66.6	150.2	199.0	66.0	30.073	67.0	Aug. 11.							
10 10	15.44	66.6	150.8	199.3	66.0	30.074	67.8	24 0	15.34	66.5	157.4	202.5	66.2	30.054	65.5
12 0	16.05	68.0	154.0	199.5	67.5	30.082	66.6	1 50	16.37	67.6	156.0	206.5	67.0	30.068	70.0
13 50	15.42	67.6	153.5	206.0	68.1	30.095	66.0	2 0	16.28	68.0	154.0	205.3	67.2	30.066	70.0
14 0	15.42	67.0	153.0	206.0	68.1	30.101		2 10	16.39	68.2	153.2	206.0	67.5	30.074	70.3
14 10	15.42	67.6	152.8	205.2	68.1	30.105	65.8	Aug. 12.							
16 0	20.19	67.5	157.4	213.4	68.2	30.114	65.9	1 50	17.30	68.5	156.0	203.5	67.9	30.068	73.0
17 50	21.28	67.6	164.0	218.0	68.0		65.2	2 0	17.13	69.0	156.2	204.5	68.0	30.071	73.4
18 0	21.02	68.0	169.1	214.0	68.0	30.123	66.2	2 10	17.25	69.0	156.0	205.5	68.5	30.068	74.0
18 10	21.25	68.5	166.7	211.5	68.1	30.123	65.8	4 0	18.40	72.5	145.6	209.7	73.8	30.061	75.0
20 0	23.00	67.8	156.0	200.5	67.8	30.120	63.8	5 50	18.10	72.9	144.5	209.5	73.8	30.053	75.0
21 50	20.15	67.1	158.1	213.5	66.8	30.131	63.2	6 0	18.08	72.8	144.1	208.5	73.6	30.054	69.7
22 0	20.05	67.0	158.5	213.0	66.8	30.135	63.3	6 10	17.48	72.5	144.8	208.0	73.2	30.057	67.0
22 10	19.40	66.9	158.3	211.0	66.7	30.133	63.3	8 0	16.36	71.0	147.0	204.6	71.0	30.051	68.6
Aug. 6.								10 0	16.48	71.4	150.5	203.0	71.3	30.069	68.5
24 0	16.30	66.6	160.7	203.5	66.2	30.135	64.2	12 0	16.39	70.7	151.5	201.3	70.3	30.077	66.0
1 50	16.41	66.6	159.2	204.9	66.0	30.138	66.6	13 50	15.38	68.3	146.5	200.5	68.0	30.099	65.2
2 0	16.33	66.6	158.3	205.0	66.1			14 0	16.11		147.5	201.0			
2 10	16.34	66.8	156.0	205.8	66.1	30.142	66.3	14 10	16.25	68.6	147.0	201.0	68.2	30.091	65.2

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
16 0	+17.13	69.6	146.0	201.7	68.3	30.083	65.0	21 50	+16.02	68.5	156.5	202.8	68.0	29.892	64.7
17 50	17.07	69.5	148.0	200.3	68.0	30.075	64.6	22 0	16.00	68.5	156.5	203.0	68.0	29.894	64.3
18 0	17.10		147.9	200.8				22 10	16.04	68.5	156.5	203.0	68.0	29.896	63.7
18 10	17.11	69.5	148.0	200.6	68.0	30.073	64.6	Aug. 18.							
20 0	17.09	69.2	141.6	201.6	67.6	30.064	63.8	24 0	15.34	68.0	163.7	204.6	67.5	29.901	66.3
21 50	16.46	68.3	148.9	200.0	67.0	30.075	61.1	1 50	16.32	69.5	161.0	207.5	69.8	29.887	72.0
22 0	16.39		150.0	200.2				2 0	16.38	70.0	160.5	207.8	69.8	29.893	71.6
22 10	16.29	68.0	151.3	200.1	66.8	30.071	61.0	2 10	16.34	70.0	160.0	208.2	69.8	29.882	71.0
Aug. 13.								Aug. 19.							
24 0			153.8	197.9	65.1	30.090	60.5	1 50	19.08	73.0	161.8	222.2	72.3	29.853	75.8
1 50	14.44	65.0	152.4	201.8	64.3	30.116	60.5	2 0	19.10	73.1	156.5	222.1	72.4	29.855	75.8
2 0	14.43	65.0	152.4	201.0				2 10	19.13	73.2	150.0	222.4	72.5	29.851	76.4
2 10	14.47	65.0	152.0	201.8	64.1	30.098	60.7	4 0	19.19	75.4	143.0	219.0	75.0	29.848	77.1
Aug. 15.								5 56	20.39	79.5	137.0	213.2	81.0	29.804	82.0
1 50	14.43	65.5	154.5	206.2	65.0	29.879	64.6	6 0			139.3	211.8			
2 0	14.44	65.6	151.8	206.6	65.1	29.881	65.8	6 10	20.34	80.0	138.2	212.7	81.8	29.795	82.3
2 10	15.06	66.0	151.7	206.4	65.5	29.881	66.9	8 0	21.31	83.0	147.2	209.5	85.0	29.768	82.8
4 0	16.32	70.6	142.2	208.2	70.5	29.874	72.8	9 50			166.2	204.0	84.3	29.759	81.0
5 50	17.11	71.5	140.0	206.4	72.1	29.863	70.6	10 0	19.16	83.5	166.7	204.3	84.0		
6 0	17.16	72.0	143.6	207.6	72.5	29.863	71.5	10 10	19.26	83.3	166.6	203.1	84.0	29.759	80.8
6 10	17.08	72.3	143.0	207.2	72.6	29.864	71.7	12 0	19.27		161.3	204.0	79.0	29.777	75.0
8 0	17.27	73.5	149.0	202.7	73.6	29.888	72.3	13 50			157.2	204.3	78.5		
9 50	17.30	73.5	155.9	203.1	73.6	29.851	72.0	14 0	19.27	77.0	157.6	206.3	78.5	29.787	70.2
10 0	17.32	73.5	155.9	204.9	73.2	29.850	71.9	14 10	19.23	77.0	157.8	207.5	78.4	29.791	70.1
10 10	17.39	73.4	156.0	202.9	73.4	29.853	72.0	16 0			158.0	207.1	75.0	29.839	69.0
12 0	17.17	71.9	146.6	203.2	71.8	29.881	69.3	17 50	17.20	71.0	158.5	206.0	74.3	29.831	64.8
13 50	18.10	72.5	149.6	205.1	71.4	29.896	65.6	18 0	17.18		159.5	205.9	74.0		
14 0	18.07	72.4	149.7	205.1	71.4	29.902	65.6	18 10	17.22	71.0	160.3	205.7	74.0	29.838	64.8
14 10		72.5	149.6	205.4	71.4	29.907	65.1	20 0	16.27	69.5	155.5	206.5	71.0	29.844	62.5
16 0	17.42	71.4	157.5	204.0	70.2	29.886	64.2	22 0	15.35	67.2	158.8	205.5	68.6	29.867	61.6
17 50	17.36	70.2	160.4	202.7	69.0	29.885	64.1	Aug. 20.							
18 0	17.39	70.1	158.9	202.8	69.0	29.887	64.1	24 0	15.12	66.6	165.1	202.5	68.0	29.875	64.8
18 10	17.41	70.1	158.3	203.1	69.1	29.889	64.2	1 50			160.8	210.0	69.8	29.887	71.4
20 0	17.00	69.6	152.6	204.9	68.2	29.873	64.3	2 0	16.10	68.7	160.2	210.1	70.0	29.889	70.2
21 50	16.20	69.0	155.7	203.4	68.9	29.882	63.8	2 10	16.19	69.0	160.2	210.0	70.2	29.892	70.4
22 0	16.12	69.0	157.4	203.7	67.8	29.882	63.8	Aug. 22.							
22 10	16.37	68.7	158.2	203.1	67.4	29.880	63.8	1 50	13.39	61.4	165.2	205.0	63.1	30.245	64.5
Aug. 16.								2 0	14.03	62.1	165.2	205.8	63.7		
24 0	14.46	66.3	163.3	203.8	67.0	29.890	63.2	2 10	14.10	62.7	206.2	206.2	64.3	30.236	66.3
1 50	16.00	67.5	161.0	208.5	67.5	29.889	68.0	4 0	17.08	68.5	154.6	210.2	72.0	30.232	74.0
2 0	15.49	67.5	161.0	208.7	67.5	29.897	68.8	5 50	18.21	73.0	149.0	210.5	76.5	30.229	77.2
2 10	16.02	67.6	160.0	208.6	67.8	29.907	68.9	6 0	18.24	73.4	148.2	211.5	78.0		
Aug. 17.								6 10	18.32	73.8	148.2	210.8	78.1	30.222	79.0
1 50	16.12	67.5	164.0	210.0	66.7	29.913	71.0	8 0	19.26	77.0	150.1	209.3	80.8	30.206	77.8
2 0	16.17	68.0	163.3	209.2	67.0	29.927	72.0	10 10	19.20	78.0	153.1	208.2	79.6	30.204	76.8
2 10	16.29	68.2	163.0	209.5	67.3	29.923	73.0	12 0	18.00	74.8	153.8	205.3	75.4	30.213	68.7
4 0	18.16	71.6	152.8	211.7	71.6	29.893	75.7	13 50	16.30	71.2	146.4	207.6	72.0	30.231	63.0
5 50	19.14	75.0	144.0	211.8	76.0	29.893	78.0	14 0	16.49	71.2	151.5	206.6	72.0		
6 0	19.13	75.2	143.8	212.0	76.2	29.887	77.0	14 10	17.00	71.2	149.2	204.5	71.8	30.240	62.3
6 10	19.12	75.5	143.6	211.0	76.5	29.889	77.6	16 0	15.40	66.5	154.8	201.3	70.0	30.244	60.2
8 0	18.32	75.6	149.0	208.2	76.7	29.862	74.0	17 50	16.18	67.0	152.6	197.7	68.0	30.247	57.5
9 50	18.38	76.4	154.3	206.8	76.8	29.861	76.5	18 0	17.00	67.2	152.0	197.7	67.8		
10 0	18.44	76.4	154.5	206.8	76.8	29.863	76.7	18 10	16.37	67.1	151.9	198.0	67.5	30.260	57.7
10 10	18.43	76.5	154.3	207.0	76.8	29.855	77.0	20 0	15.02	65.6	149.8	201.5	66.0	30.229	56.8
12 0	18.34	76.0	155.0	207.0	76.0	29.885	72.2	22 10	15.22	63.5	158.3	198.5	64.0	30.257	55.2
13 50	17.28	73.0	156.7	205.1	74.0	29.913	68.0	Aug. 23.							
14 0	17.42	73.0	156.6	204.7	73.8	29.920	67.0	24 0	15.22	62.8	165.9	198.4	62.3	30.298	59.4
14 10	17.45	73.0	157.0	203.6	73.2	29.919	67.0	2 0	16.30	67.0	158.7	206.0	68.0	30.298	70.0
16 0	17.18	70.0	155.4	204.2	72.0	29.926	65.0	Aug. 24.							
17 50	18.30	70.0	167.4	209.7	70.0	29.923	65.4	1 50	15.10	61.0	159.4	203.2	62.0	30.231	64.6
18 0	18.33	69.0	167.5	210.0	70.0	29.921	65.2	2 0	15.37	61.3	159.9	203.7	62.1	30.245	68.0
18 10	18.32	69.0	167.5	210.0	70.0	29.919	65.0	2 10	14.17	61.5	156.1	203.0	63.0	30.250	65.6
20 0	18.15	68.8	165.5	207.7	69.0	29.903	63.2	4 0	16.37	67.0	147.9	204.2	70.7	30.246	72.8

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								Sept. 13.							
6 0	+17.44	71.0	143.0	206.6	76.0	30.193	74.0	h. m.							
8 0	18.37	74.0	149.7	203.0	77.8	30.138	73.8	2 0	+18.46	69.0	140.0	206.4	67.9	29.411	69.6
12 0	18.15	72.5	153.5	203.4	72.8	30.122	68.0	3 0	18.41	69.5	140.0	206.0	68.6	29.420	69.6
13 50	17.45	69.5	163.5	202.5	70.0	30.133	62.0	4 0	18.33	69.7	136.0	211.0	69.5	29.432	70.0
14 0	17.40	69.1	159.5	204.9	70.0			5 0	18.31	70.3	133.2	209.2	70.0	29.415	69.1
14 10	17.25	69.0	159.6	206.5	69.8	30.133	61.4	6 0	18.07	72.4	133.5	210.0	72.8	29.432	72.5
16 0	15.49	65.5	156.5	203.7	67.8	30.119	58.5	7 0	15.28	67.0	134.6	201.5	68.9	29.473	61.4
22 0	12.49	58.5	159.5	200.9	61.4	30.063	54.2	8 0	15.00	67.0	136.0	205.0	67.9	29.520	62.8
Aug. 25.								11 0	13.20	64.3	162.0	212.3	64.0	29.723	59.0
24 0	12.46	58.6	159.5	200.7	60.8	30.065	58.6	12 0	10.42	64.0	160.0	209.0	64.0	29.526	57.0
2 0			163.3	203.0	62.0	30.058	66.6	13 0	9.35	64.0	155.2	206.0	64.0	29.538	58.0
Aug. 26								14 0	14.36	64.9	159.1	206.0	63.6	29.796	58.5
1 50	18.38	70.5	161.0	209.2	70.3	29.937	70.8	15 0	14.42	65.0	159.0	201.3	63.3	29.738	58.3
2 0	18.26	70.5	160.0	210.0	70.5	29.935	71.0	16 0	20.41	64.0	156.0	212.1	63.0	29.654	58.5
2 10	18.22	70.5	160.0	209.6	70.8	29.950	71.2	17 0	16.31	63.5	156.0	202.5	62.0	29.689	
4 0	19.29	73.0	147.5	210.5	74.5	29.928	75.6	18 0	14.32	63.5		200.5	61.5	29.723	
5 50	21.04	75.6	144.6	205.8	77.2	29.907	74.2	19 0	14.32	63.0	155.5	200.0	61.0	29.755	
6 0	20.46	75.6	144.3	205.5	77.0	29.901	73.5	22 0	14.18	62.5	152.7	199.7	61.0	29.857	60.9
6 10	20.40	75.4	145.0	203.6	77.0	29.908	73.4	23 0	14.02	60.5	153.0	201.1	61.0	29.867	55.5
8 0	20.10	75.3	146.6	205.6	76.8	29.879	75.0	Sept. 14.							
Term day			omit	ted.				4 0	14.41	63.5	142.2	207.0	66.0	29.938	62.0
Sept. 5.								11 0	15.43	67.3	153.0	199.3	65.0	29.968	57.8
1 50	15.33	61.8	164.0	208.0	62.5	29.741	67.4	14 0	12.37	57.5	148.0	197.6	55.8	30.008	56.0
2 0	16.00	64.0	163.7	208.2	62.8	29.747	68.3	15 0	13.03	53.0	148.0	200.0	52.7	29.998	58.6
2 10	16.01	64.0	162.5	209.0	63.0	29.764	68.6	17 0	13.04	53.0	148.0	204.7	55.0	30.002	57.6
6 0	16.34	68.0	141.5	209.0	68.5	29.724	69.0	18 0	13.00	53.0	147.0	204.0	55.0	29.891	56.9
8 10	16.46	71.0	148.7	202.3	71.2	29.716	71.4	Sept. 15.							
10 0	18.15	72.5	157.0	201.7	73.0	29.705	71.8	11 0	10.22	55.0	155.3			29.953	50.7
12 0	16.32	72.0	156.0	215.5	72.0	29.721	69.0	12 0	11.12	55.5	154.0	196.8	55.8	29.980	51.0
14 0	17.22	71.0	154.0	205.0	71.0	29.38	67.0	15 0	12.41	56.5	150.0	197.0	56.5	29.850	54.0
16 0	16.17	67.5	154.0	202.6	68.0	29.817	61.8	16 0	12.42	57.5	151.0	199.5	58.0	29.940	52.0
22 0	14.14	60.0	153.6	198.4	61.6	29.935	55.0	17 0	13.08	59.0	152.5	200.5	60.5	29.936	54.0
Sept. 6.								18 0	14.32	60.0	157.5	201.0	62.5	29.962	53.0
24 0	13.37	60.0	160.2	197.1	59.0	29.952	52.0	18 50	15.34	60.0	145.0	198.0	60.0	29.911	56.5
Sept. 7.								19 0	15.30	60.0	145.0	200.0	60.0	29.900	
1 50	13.15	57.5	161.9	201.4	57.0	29.930	60.0	19 10	14.22	60.0	146.0	203.0	59.4	29.890	57.1
2 0	13.25	57.5	161.9	201.6	57.0	29.923	60.0	Sept. 16.							
2 10	13.39	59.0	161.4	202.3	57.0	29.913	60.5	13 10	13.29	61.5	152.0	204.0	60.8	29.858	56.0
4 0	14.30	61.5	151.5	207.2	61.5	29.893	66.5	14 0	13.00	61.5	152.0	203.6	60.8	29.848	56.0
6 30	16.24	66.0	144.0	204.3	67.0	29.853	73.0	15 0	13.37	61.5	154.5	204.0	60.5	29.880	56.0
8 0	17.16	68.5	148.6	202.0	70.8	29.805	72.3	16 0	15.33	61.3	154.0	202.0	62.0	29.879	56.0
10 0	18.12	70.5	155.8	203.0	72.0	29.762	71.0	17 0	16.10	61.0	158.5	207.7	63.5	29.863	56.0
Sept. 12.								18 0	16.07	61.5	161.4	211.0	64.0	29.861	56.0
24 0	15.25	63.5	162.0	197.7	63.2	29.530	69.0	19 0	15.30	61.0	157.0	212.3	64.7	29.871	57.0
2 0	18.09	68.7	149.0	210.5	71.8	29.569	74.1	23 0	14.40	61.0	156.0	200.0	63.4	29.892	55.6
3 0	13.31		153.0	212.0	75.6	29.564	77.0	Sept. 17.							
4 0	21.20	74.6	145.7	209.0	78.2	29.545	78.5	24 0	13.47	61.0	161.5	200.5	62.5	29.899	57.0
5 0	18.44	76.0	149.0	214.0	78.0	29.533	82.0	1 0	13.40	60.5	162.5	204.2	62.0	29.898	58.4
7 0	22.44	79.5	146.0	204.0	81.2	29.522	83.5	Sept. 18.							
8 0	10.02	81.0	149.2	205.2	83.0	29.361	84.0	3 0	12.43	57.5	151.0	201.5	57.3	29.751	57.5
11 0	12.16	82.3		216.0	82.8	29.504	80.8	4 0	13.45	68.0	151.2	204.0	61.0	29.736	61.0
12 0	16.24	82.0	144.8	210.0	82.0	29.402	79.0	5 0	13.31	62.0	148.0	203.8	62.8	29.734	61.2
13 0	18.10	80.0	146.4	211.0	79.0	29.513	71.2	6 0	13.32	61.5	147.7	200.6	63.5	29.757	60.8
14 0	20.04		146.0	212.4	75.9	29.503	67.0	7 0	13.09	61.3	144.0	198.2	62.8	29.801	60.2
15 0	20.39	75.3	156.0	211.2	75.0	29.504	66.3	8 0	13.05	60.8	150.1	191.9	62.0	29.754	57.2
16 0	18.47	74.7	155.7	204.5	73.0	29.460	66.0	9 0	12.18	61.4	144.5	199.6	61.5	29.729	55.0
17 0	18.46	73.6	147.7	215.4	72.0	29.403	65.1	10 0	12.47	61.5	146.5	190.0	61.1	28.930	51.2
18 0	18.36	73.1	149.0	206.6	71.7	29.403	64.2	11 0	9.31	60.3	155.5	200.0	60.2	28.933	53.1
19 0	18.35	72.2	143.0	208.5	70.9	29.385	62.8	12 0	12.01	60.5	144.7	198.0	59.2	29.837	52.0
20 0	18.41	71.5	146.0	205.2	70.0	29.374	63.0	13 0	12.28	60.6	147.0	199.5	59.0	29.869	51.3
21 0	18.35	72.0	147.5	205.0	69.5	29.363	65.0	13 50	11.05	58.5	156.0	209.0	58.9	29.800	48.8
22 0	18.22	72.0	145.0	202.0	68.0	29.375	61.3	14 0	10.24	58.0	163.4	212.1	58.3	29.801	48.6
								14 52	10.03	57.5	164.0	211.7	58.4	29.814	48.8

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
15 0	+12.21	53.5	154.2	202.8	57.8	29.886	48.0	21 0	+12 10	53.8	150.5	204.0	63.5	29.803	38.7
16 0	12 15	59.0	152.8	203.4	59.0	29.880	47.4	22 0	14.06	53.5	146.0	201.0	65.0	29.803	37.8
17 0	12.15	59.0	152.9	200.2	61.2	29.809	45.2	23 0	11.23	52.5	144.7	201.1	63.9	29.818	38.0
18 0	13.12	59.2	153.9	202.1	63.0	29.832	46.1	Sept. 23.							
19 0	14.45	61.0	153.2	201.8	64.0	29.832	46.6	24 0	10.16	52.7	161.0	200.0	60.6	29.837	39.9
20 0	14.35	60.3	157.0	202.1	63.3	29.845	45.1	1 0	11.29	53.5	160.0	204.0	59.7	29.850	42.0
21 0	13.17	59.0	154.0	200.0	61.9	29.765	46.0	1 50	10.17	54.3	161.0	207.1	61.0	29.764	43.8
22 0	13.45	59.0	154.0	200.6	61.1	29.853	45.2	2 0	10.24	54.4	160.0	208.1	61.1	29.767	44.2
23 0	14.43	58.5	163.6	197.0	60.5	29.907	45.2	2 10	10.24	54.4	159.0	208.6	61.3	29.765	44.8
Sept. 20.								3 0	10.13	55.5	154.0	208.5	62.5	29.724	46.4
24 0	12 18	57.5	164.3	195.6	58.7	29.933	45.7	4 0	11.14	57.0	147.5	209.2	66.0	29.862	49.5
1 0	12.45	57.5	147.0	210.0	59.5	29.770	50.5	5 0	11.04	59.0	143.5	207.6	67.8	29.719	51.8
1 50	12.11	60.0	160.3	200.3	62.0	29.943	53.0	6 0	12.01	60.0	145.5	238.0	69.5	28.911	53.5
2 0	13.01	69.1	163.0	203.0	62.5	29.947	53.0	7 0	12.27	62.0	147.3	231.5	67.0	28.995	53.0
2 10	12.27	59.2	162.5	204.5	62.9	29.948	52.3	8 0	12.06	61.0	145.0	198.0	64.5	29.672	53.8
3 0	12.45	59.0	151.7	206.0	62.8	29.949	54.5	9 0	12.37	62.0	153.0	193.0	62.5	29.848	54.1
4 0	12.26	58.5	151.0	208.0	64.3	29.954	57.0	10 0	10.37	61.5	152.7	193.3	60.5	29.859	52.0
5 0	13.23	60.0	149.0	206.0	63.5	29.931	59.0	11 0	11.06	60.0	151.9	194.1	57.3	29.888	47.7
6 0	12.24	61.0	146.0	205.0	66.0	29.905	61.0	12 0	12.05	59.3	155.0	196.2	56.5	29.405	43.2
7 0	14.12	64.0	147.5	202.0	65.0	28.935	61.5	13 0	12.45	57.5	155.4	195.0	56.0	29.932	41.6
8 0	13.18	63.5	148.2	209.0	66.0	29.894	62.5	13 50	12.40	56.0	153.0	193.0	55.0	29.939	40.5
9 0	13.42	66.0	150.0	203.7	66.5	29.899	63.4	14 0	12.12	57.0	157.0	192.7	55.0		
10 0	13.38	64.7	149.0	201.5	65.0	29.880	58.9	14 10	12.20	57.0	157.5	192.9	55.0	29.924	40.0
11 0	13.35	64.4	150.1	197.0	64.0	29.934	57.5	15 0	12.45	55.7	155.2	195.4	55.5	29.917	37.5
12 0	12.35	63.0	139.0	201.0	62.5	29.843	52.0	16 0	12.21	54.0	148.2	191.5	55.0	29.964	36.0
13 0	14.30	60.6	191.9	211.0	60.0	29.930	49.3	17 0	10.40	52.0	157.5	196.0	55.0	29.950	35.5
13 50	12.12	58.0	158.5	196.2	58.5	29.962	48.2	18 0	10.40	54.0	157.0	196.0	56.0	29.958	34.0
14 0	13.19	58.2	162.5	195.2	58.3		47.0	19 0	9.15	50.5	154.5	194.0	55.3	29.957	34.0
14 10	13.33	58.4	158.4	195.6	58.1	29.934	48.0	20 0	10.12	49.0	159.0	197.2	57.0	29.949	33.0
15 0	11.34	58.7	155.5	197.5	57.8	29.929	46.4	21 0	9.43	48.0	158.5	197.5	58.0	29.932	32.0
16 0	11.44	57.5	153.5	198.5	58.9	29.914	45.7	22 0	9.20	47.0	154.2	198.0	58.7	29.935	31.0
17 0	11.14	57.5	153.8	198.7	58.8	29.912	45.1	23 0	7.43	46.5	156.0	198.0	58.0	29.917	31.0
18 0	11.35	57.6	155.7	199.3	59.3	29.900	42.2	Sept. 24.							
19 0	13.23	57.5	148.0	195.0	59.7	29.877	41.4	24 0	6.25	45.0	150.0	198.0	56.8	29.991	32.5
20 0	14.18	57.7	156.7	201.6	59.6	29.872	40.4	1 0	6.29	44.8	161.0	197.0	56.1	30.009	35.5
21 0	12.07	57.1	160.0	200.5	59.3	29.751	40.1	1 50	12.08	46.5	160.0	199.5	56.0	30.147	40.0
22 0	11.33	57.0	157.0	201.0	59.0	29.801	41.1	2 0	13.10	46.7	160.0	199.5	56.0		
23 0	11.19	56.2	157.0	202.5	58.8	29.821	41.3	2 10	13.12	47.1	160.0	199.8	56.0	30.041	42.1
Sept. 21.								Sept. 26.							
24 0	11.11	55.0	155.2	200.5	57.5	29.805	42.5	1 50	8.48	47.7	158.7	190.5	48.6	30.195	47.0
1 0	10.35	55.0	161.0	197.5	57.4	29.788	46.5	2 0	9.09	47.9	158.5	190.3	48.8		
1 50	11.48	55.7	160.0	198.5	58.0	29.719	51.0	2 10	9.12	48.1	158.7	190.8	49.5	30.188	49.8
2 0	11.49	55.9	160.0	199.5	58.0			3 0	9.29	51.0	158.0	193.1	54.0	30.182	54.1
2 10	11.09	56.0	160.0	200.0	58.0	29.760	52.0	4 0	11.29	53.4	156.5	196.0	58.5	30.063	60.8
3 0	11.13	57.2	157.7	205.5	59.5	29.778	56.8	5 0	12.18	57.5	154.4	200.0	65.0	30.164	62.0
4 0	11.44	60.0	152.5	211.4	61.8	29.570	53.7	6 0	14.31	60.2	152.0	202.0	68.0	30.121	63.8
7 0	12.36	62.3	145.0	203.2	63.0	29.564	63.3	7 0	15.00	64.0	150.0	202.0	69.5	30.109	65.2
8 0	12.42	62.5	145.5	200.3	63.5	29.564	62.5	8 0	15.35	66.0	150.0	201.6	70.2	30.086	67.0
9 0	12.47	68.0	152.0	199.0	63.0	29.504	58.5	9 0	15.30	67.5	150.0	202.0	70.8	30.100	
Term day omitted.								10 0	16.10	67.5	151.0	200.8	70.0	30.107	65.0
Sept. 22.								12 0	14.39	64.2	153.2	198.8	65.2	30.085	54.8
11 0	11.14	56.5	152.7	201.7	61.1	29.727	47.5	13 0	10.37	64.0	144.5	197.5	63.5	30.080	52.0
12 0	12.30	56.8	153.9	198.8	60.5	29.750	45.2	14 0	14.12	61.5	155.1	196.3	61.3	30.099	49.2
13 0	12.42	57.5	159.0	199.2	61.5	29.620	44.0	15 0	13.26	59.3	154.0	198.5	60.0	30.090	48.0
13 50	13.09	58.2	162.0	197.0	61.8	29.849	43.8	16 0	13.24	58.0	153.4	195.2	59.0	30.086	46.0
14 0	13.30	58.0	167.0	193.2	62.1			17 0	12.41	58.5	154.5	197.0	60.0	30.078	45.0
14 10	13.49	58.1	163.8	190.0	61.9	29.837	43.5	18 0	12.49	57.5	154.5	197.9	60.0	30.067	44.0
15 0	12.21	58.2	156.0	201.5	62.0	29.832	41.1	19 0	12.19	57.0	154.5	197.1	60.0	30.067	43.0
16 0	12.34	57.9	152.5	200.7	61.6	29.837	40.8	20 0	11.10	55.0	150.0	197.4	59.5	30.065	42.0
17 0	12.27	57.6	160.0	200.0	61.1	29.841	39.6	21 0	11.05	53.5	150.1	197.5	59.5	30.051	41.0
18 0	12.25	56.8	151.5	203.0	60.6	29.848	39.3	22 0	10.40	53.5	151.0	197.0	60.0	30.058	41.0
19 0	13.26	55.7	144.6	203.0	60.5	29.843	38.9	23 0	10.29	53.5	151.5	197.7	61.0	30.047	41.0
20 0	13.40	55.4	143.0	202.5	61.6	29.837	39.0								

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
Sept. 27.								h. m.							
24 0	+11.27	55.2	155.4	198.3	61.0	30.066	41.0	14 0	+12.32	60.0	153.0	196.3	57.5	30.022	45.0
1 0	9.00	54.0	160.8	198.0	61.5	30.015	45.0	15 0	12.42	57.9	151.8	196.0	56.5	30.021	45.1
1 50	11.21	53.5	158.6	199.3	62.8	30.083	44.4	16 0	12.05	57.0	149.2	194.5	55.0	30.024	45.0
2 0	11.22	53.5	158.5	200.0	63.0			17 0	11.47	56.0	144.7	196.8	56.6	30.010	45.1
2 10	11.22	53.5	158.6	200.0	63.4	30.081	51.0	18 0	11.39	55.5	148.0	199.0	61.1	30.022	43.3
3 0	10.39	54.6	158.0	202.6	66.6	30.068	56.2	19 0	11.39	55.0	146.3	199.5	63.5	30.010	44.1
4 0	11.41	57.0	154.2	205.1	71.5	30.015	63.1	20 0	11.41	53.5	149.0	201.0	63.5	29.959	43.0
5 0	13.12	59.8	150.5	207.7	75.0	30.033	65.0	22 0	11.37	55.5	151.0	199.0	62.0	29.950	43.0
6 0	14.38	65.1	148.8	209.7	75.6	29.959	69.0	23 0	10.03	54.0	147.0	199.3		29.954	44.0
7 0	15.30	68.0	150.0	209.5	77.5	29.956		Sept. 30.							
8 0	18.04	70.8	150.1	208.8	78.2	29.907	71.8	1 0	11.44	54.0	148.0	200.4	62.0	29.990	44.0
9 0	18.00	71.2	151.0	208.9	77.2	29.914	70.0	1 50	11.19	55.5	148.4	199.0	60.0	30.003	53.5
10 0	18.00	71.0	151.5	208.5	75.2	29.903	69.0	2 0	11.19	55.7	146.9	199.4	60.0		
11 0	17.07	70.3		208.2	74.2	29.919	65.3	2 10	11.25	55.7	147.0	199.3	60.5	29.980	55.5
12 0	16.09	67.6	145.4	204.0	71.8	29.866	60.2	3 0	12.18	57.4	152.4	202.0	63.0	29.962	58.2
13 0	15.07	66.0	147.0	204.0	69.5	29.897	58.0	5 0	13.41	61.8	149.5	204.5	63.4	29.905	60.9
13 50	14.38	65.1	147.2	200.8	68.1	29.858	57.0	10 0	12.11	60.0	150.0	198.2	59.5	29.844	58.0
14 0	14.42	64.2	147.1	200.9	68.0			11 0	12.35	60.0	148.5	202.2	59.0	29.837	57.4
14 10	14.42	64.3	147.6	201.2	67.9	29.860	56.4	12 0	12.32	60.0	151.5	198.2	59.0	29.848	57.0
15 0	14.36	63.5	147.2	200.5	66.7	29.863	54.0	13 0	10.05	58.5	152.0	199.5	59.0	29.863	55.0
16 0	14.14	63.0	147.1	200.0	65.0	29.861	52.9	14 0	9.24	60.0	158.5	200.5	59.0	29.857	54.0
17 0	14.03	62.0	147.3	201.0	63.3	29.863	52.8	15 0	10.11	60.0	153.0	203.6	61.0	29.797	52.0
18 0	13.31	61.1	147.8	198.9	61.7		51.6	16 0	10.03	59.0	153.0	202.3	64.0	29.806	49.0
19 0	13.10	60.0	147.9	198.1	60.8	29.756	50.8	17 0	10.41	58.5	155.0	204.0	66.0	29.849	48.0
20 0		60.0	147.5	196.1	60.0	29.798	50.9	18 0	9.30	57.5	156.0	201.0	65.0	29.870	49.2
21 0	14.07	60.0	156.3	196.0	59.8	29.755	52.7	19 0	9.40	57.5	155.0	203.0	65.0	29.866	48.0
22 0	14.14	60.0	154.9	197.0	63.5	29.772	53.9	20 0	10.27	58.0	154.0	204.0	66.0	29.840	45.0
23 0	14.14	60.0	155.7	198.5	66.0	29.766	56.0	21 0	11.00	56.0	153.5	202.0	64.0	29.826	44.0
Sept. 28.								22 0	11.00	55.5	150.0	203.0	64.0	29.853	44.0
24 0	13.04	58.0	149.1	199.5	66.0	29.756	54.0	23 0	11.05	55.0	144.0	201.4	63.8	29.851	43.3
1 0	11.00	59.0	157.0	199.0	66.0	29.754	58.0	Oct. 1.							
1 50	14.10	60.3	158.0	201.4	66.0	29.760	63.0	24 0	11.20	54.5	155.0	197.2	63.5	29.814	43.0
2 0	14.19	60.5	158.5	201.0	66.0			1 0	11.25	55.0	157.0	196.5	61.5	29.634	47.0
2 10	14.14	60.5	158.0	201.4	66.1	29.768	63.0	1 50	11.23	55.7	158.1	199.2	61.5	29.819	51.0
3 0			156.9	203.7	68.8	29.750	65.1	2 0	11.28	55.9	157.7	199.1	61.6		
5 0	17.47	68.0	150.5	206.3	74.8	29.749	71.0	2 10	11.32	56.1	157.8	199.6	61.8	29.829	54.0
6 0	18.17	70.2	149.0	205.4	76.2	29.702	72.0	Oct. 3.							
7 0	18.03	71.5	148.8	205.9	78.3	29.681		1 50	9.34	49.2	156.4	194.0	49.0	29.777	51.2
8 0	19.10	73.5	146.4	208.5	78.0	29.732	72.5	2 0	9.40	49.7	158.0	194.2	49.4		
10 0	18.31	73.0	150.0	204.8	76.0	29.730	70.5	2 10	10.03	50.0	156.8	194.5	49.6	29.762	53.0
12 0	17.31	71.2	150.0	204.9	73.0	29.771	64.1	4 0	11.05	53.4	153.6	196.4	56.5	29.742	56.1
13 0	17.35	71.0	145.5	205.0	71.0	29.805	60.5	6 0	10.42	58.5	148.1	199.5	60.0	29.608	59.5
15 0	16.28	66.5	145.6	201.7	67.2	29.819	57.2	7 50	14.08	61.0	150.0	198.0	62.2	29.656	62.1
16 0	10.42	65.5	145.3	202.0	66.4	29.813	56.0	8 0	14.25	61.0	150.0	197.8	62.2		
17 0	10.29	64.5	150.5	205.3	64.5	29.825	57.5	8 10	14.34	61.2	150.0	198.0	62.5	29.698	62.0
18 0	10.04	63.7	155.1	201.0	64.5	29.840	55.4	10 0	14.10	62.0	152.5	200.0	62.1	29.686	60.2
19 0	10.18	63.0	148.9	198.2	62.5	29.823	54.2	12 0	14.47	61.3	153.3	197.0	59.5	29.709	52.5
20 0	10.05	62.4	147.8	198.3	61.8	29.817	53.6	13 50	13.17	58.0	153.8	194.8	57.2	29.757	47.0
21 0	10.28	61.5	149.3	197.7	60.0	29.816	53.5	14 0	13.45	57.7	155.5	195.3	57.0		
22 0	10.12	60.0	148.2	198.5	60.5	29.742	53.5	14 10	13.41		155.3	195.3	56.9	29.778	46.0
23 0	9.42	60.4	132.5	204.5	60.5	29.762	49.5	16 0	12.09	57.5	156.5	197.5	57.0	29.697	46.0
Sept. 29.								18 0	12.18	56.8	150.5	197.3	58.0	29.765	43.8
24 0	10.33	60.5	139.5	198.6	60.5	29.825	49.0	19 0	12.36	55.5	150.0	198.0	58.0	29.728	43.2
1 0	16.09	58.0	137.9	197.7	58.0	29.874	49.0	19 50	11.14	54.7	149.3	199.6	64.6	29.778	41.2
2 0	14.25	57.0	156.0	198.0	58.0	29.685	53.0	20 0	11.12	54.5	149.5	199.5	64.6		
3 0			148.0	205.6	62.8	29.977	63.0	20 10	11.27	54.8	149.5	199.8	64.8	29.761	41.1
4 0	14.03	61.0	149.5	209.2	64.0	29.922	63.0	22 0	11.26	52.6	152.0	198.0	62.5	29.650	38.5
6 0	14.45	60.7	150.9	202.0	64.7	29.962	60.5	Oct. 4.							
7 0	14.05	62.7	152.5	201.8	65.5	29.971	60.7	24 0	10.32	51.0	154.0	195.0	58.5	29.746	39.0
10 0	14.04	63.0	152.5	197.7	62.0	29.957	57.5	1 12	9.45	51.5	162.2	195.8	57.5	29.840	44.0
11 0	13.24	61.6	152.5	196.3	60.0	29.989	54.5	1 50	9.45	51.5	161.2	200.5	57.5	29.748	46.0
13 0	11.05	62.0	147.0	196.5	58.0	29.995	47.0	2 0	9.48	51.5	161.7	200.7	57.6		
								2 10	10.03	51.5	161.2	201.0	58.0	29.841	47.5

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
4 0	+12.29	55.9	150.5	205.1	64.3	29.749	53.6	22 0	+11.20	51.5	151.0	198.0	60.9	29.754	39.0
6 0	10.15	58.5	146.0	201.2	65.0	29.780	58.0	23 0	11.46	51.0	150.0	198.7	62.8	29.771	35.0
7 50	14.23	62.0	148.0	198.0	63.8	29.786	57.3	Oct. 11.							
8 0	14.29		148.2	198.1				24 0	11.30	50.4	151.0	198.0	61.8	29.766	35.3
8 10	14.33	62.1	148.4	198.0	63.3	29.777	58.0	1 0	10.37	49.0	158.0	197.5	60.8	29.516	38.4
12 0	13.14	61.3	149.1	194.7	58.5	29.834	48.3	1 50	10.37	49.5	159.3	197.1	60.4	29.742	45.3
13 50	13.31	58.5	141.0	196.8	59.8	29.854	45.8	2 0	10.44	50.1	160.0	197.2	60.4		45.3
14 0	13.43	58.5	141.1	196.8	60.0			2 10	10.47	50.3	159.4	197.1	60.6	29.740	45.8
14 10	13.37	58.5	141.2	197.0	60.2	29.870	44.3	3 0	12.00	54.0	158.0	202.5	65.8	29.622	51.7
16 0	12.33	56.1	140.5	197.5	61.0	29.933	42.0	4 0	14.00	58.0	156.5	206.5	72.6	29.622	58.9
18 0	11.00	52.5		196.0	59.0	29.942	38.4	5 0	15.10	60.2	152.0	211.5	76.6	29.522	60.7
22 0	9.36	48.5	146.6	192.5	54.0	29.924	35.8	6 0	16.30	63.8	150.3	205.0	77.3	29.639	63.4
23 0	9.01	48.0	148.6	192.4	53.0	29.934	34.5	7 0	15.27	66.6	149.7	209.9	75.3	29.589	61.7
Oct. 5.								8 0	12.12	68.5	151.0	208.5	65.7	29.596	65.1
24 0	8.15	46.3		194.7	53.5	29.960	34.8	9 0	18.12	69.5	152.7	205.7	74.8	29.519	64.8
1 50	8.11	46.0	150.0	202.0	60.0	29.958	43.5	10 0	18.26	69.5	154.0	204.0	73.9	29.511	63.8
2 0	8.05	46.5	159.4	201.0	60.5	29.958	44.0	11 0	18.05	68.5	150.0	204.0	71.4	29.447	58.8
2 10	8.06	46.7	160.0	201.5	60.6	29.968	44.2	12 0	17.04	66.3	150.0	198.9	69.0	29.530	53.0
4 0	11.15	52.4	151.6	205.9	64.3	29.921	47.0	13 0	16.34	65.0	150.0	198.5	67.0	29.533	51.2
6 0	10.19	55.0	144.1	205.5	72.0	29.943	50.0	13 50	16.35	65.5	149.7	200.4	66.7	29.486	49.4
7 50	13.14	58.5	150.3	202.2	72.0	29.983	51.0	14 0	16.35	65.5	150.0	200.3	67.2		
8 0	13.38	58.5	151.0	202.2	71.5			14 10	17.27	65.6	149.9	200.0	67.0	29.496	48.3
8 10	13.16	58.6	150.9	202.2	71.3	29.986	51.0	15 0	16.30	64.9	149.8	200.1	66.5	29.465	48.1
12 0	12.45	57.0	157.9	197.4	61.8	30.063	40.4	16 0	16.20	63.6	150.5	197.5	64.5	29.472	46.2
13 50	12.08	55.0	157.5	196.0	59.0	30.101	40.0	17 0	15.22	62.5	150.8	197.7	63.8	29.440	45.8
14 0	12.15	55.0	157.8	196.0	59.0			18 0	15.07	59.5	150.9	200.1	65.2	29.445	44.5
14 10	12.24	55.0	157.7	195.9	59.0	30.105	40.0	19 0	14.35	59.5	149.5	201.0	67.0	29.416	46.0
16 0	11.05	52.5	156.0	195.0	56.8	30.093	36.8	20 0	14.22	68.5	150.4	197.5	64.3	29.428	47.0
18 0	11.30	51.5	150.0	192.5	59.5	30.199	35.0	21 0	14.36	68.5	151.3	198.9	63.5	29.341	46.0
Oct. 6.								22 0	14.25	68.5	149.0	199.0	64.0	29.468	45.5
4 0	9.09	48.0	151.0	202.8	60.0	30.238	50.0	23 0	14.06	57.0	151.0	200.0	66.0	29.462	45.0
6 0	13.02	54.0	147.0	201.1	63.6	30.177	55.0	Oct. 12.							
7 50	13.46	57.0	151.0	198.9	62.8	30.177	54.2	24 0	14.28	58.4	151.0	200.7	65.7	29.514	46.0
8 0	13.42	57.0	150.9	198.3	62.7			1 0	14.34	58.8	157.0	200.0	65.0	29.510	50.0
8 10	13.43	56.6	151.0	198.3	62.6	30.197	54.0	1 50	14.07	58.5	159.5	201.0	64.8	29.509	57.8
Oct. 7.								2 0	14.05	59.0	160.0	201.2	64.8		
1 0	6.23	42.6	154.1	181.4	42.1	30.156	37.2	2 10	14.05	59.4	160.0	201.0	64.8	29.543	58.6
6 0	12.29	55.0	149.0	202.2	67.0	30.074	61.3	3 0	14.31	60.0	161.5	203.5	67.0	29.500	59.5
8 0	15.11	63.0	148.0	206.7	68.5	30.027	63.8	4 0	15.32	61.1	150.8	206.0	71.3	29.503	60.7
10 0	15.49	64.0	148.0	204.1	66.3	30.042	61.8	5 0	17.03	63.2	157.2	209.7	74.8	29.525	61.5
12 0	15.02	62.2	148.7	201.2	58.0	30.066	51.9	6 0	17.30	64.8	154.0	210.5	75.0	29.532	62.8
Oct. 10.								7 0	17.40	65.8	152.0	208.4	72.5	29.549	61.5
1 50	12.34	52.5	160.3	190.7	52.0	29.733	49.0	8 0	18.48	66.3	151.3	206.1	72.2	29.532	61.1
2 0	11.13	52.5	150.9	180.8	53.0	29.733	50.0	9 0	17.27	67.0	145.3	206.2	69.5	29.599	65.0
2 10	12.33	53.0	160.4	180.7	53.5	29.733	52.0	10 0	16.11	64.0	153.5	201.6	67.5	29.606	59.0
3 0	12.11	53.6	158.9	201.1	57.2	29.748	52.4	12 0	16.32	61.3	155.5	197.8	63.3	29.717	53.1
4 0	12.26	55.5	156.5	204.2	62.9	29.733	55.4	13 0	17.44	65.5	156.5	197.0	61.3	29.716	48.8
5 0	14.48	57.9	151.8	206.6	67.6	29.792	57.6	13 50	15.37	60.5	155.7	197.4	60.8	29.733	49.1
6 0	15.01	61.0	150.3	208.1	69.9	29.790	58.7	14 0	15.13	60.5	156.1	197.2	60.4		
7 0	14.36	63.6	149.5	208.1	69.9	29.785	60.0	14 10	15.42	60.5	155.5	196.5	60.0	29.780	48.5
8 0	16.46	65.2	150.0		21.783	60.0		15 0	15.15	59.4	157.5	199.6	61.0	29.802	49.0
10 0	17.46	66.0	153.5	202.0	68.5	29.797	59.0	16 0	14.28	58.0	156.8	201.3	63.3	29.794	47.8
12 0	15.23	63.3	146.3	198.2	63.8	29.705	50.5	17 0	14.32	57.8	160.0	203.0	65.9	29.835	46.0
13 0	15.38	60.0	147.0	195.3	61.0	29.832	48.0	18 0	15.45	56.3	152.5	201.3	65.2	29.860	45.0
13 50	14.35	57.3	146.6	194.6	58.3	29.822	47.0	19 0	15.44	55.8	156.8	201.0	64.5	29.856	44.0
14 0	14.03	57.0	147.3	199.2	57.5			20 0	13.33	55.0	155.6	198.9	64.0	29.895	42.0
14 10	14.35	57.2	145.4	195.2	68.3	29.832	45.0	21 0	13.24	53.5	157.6	196.2	61.8	29.891	41.0
15 0	13.29	57.7	150.0	195.5	56.8	29.695	43.7	22 0	12.25	52.5	157.5	195.5	61.0	29.921	41.2
16 0	13.11	55.7	146.0	197.0	57.5	29.836	42.0	23 0	12.49	51.7	158.5	196.1	60.9	29.915	39.4
17 0	13.49	55.0	148.0	198.0	61.0	29.863	41.2	Oct. 13.							
18 0	13.37	55.2	147.5	200.5	62.8	29.797	41.7	24 0	12.35	50.5	160.5	196.8	61.5	29.935	38.2
19 0	12.35	54.0	148.0	198.6	62.5	29.782	38.0	1 0	12.38	51.6	157.5	198.2	59.4	29.901	42.3
20 0	12.03	53.0	149.5	200.0	62.3	29.778	37.0								

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								Oct. 18.							
1 50	+12.35	50.6	153.5	197.8	59.3	29.943	44.4	h. m.							
2 0	12.45	50.9	154.4	196.7	59.6			1 0	+6.32	39.5	156.6	186.9	40.5	30.060	38.3
2 10	12.45	51.1	155.5	196.1	59.6	29.952	45.3	3 0	9.13	44.0	148.0	197.3	45.5	30.156	50.5
3 0	12.33	52.5	158.0	203.0	62.1	29.973	48.2	4 0	vibrating	47.0	150.5	199.0	49.0	29.969	54.0
4 0	14.47	54.4	154.9	208.5	66.4	29.961	51.0	11 0	15.35	61.0	147.5	203.8	62.3	29.642	61.0
5 0	14.18	56.8	147.0	211.0	70.8	29.839	55.2	12 0	14.46	61.0	148.2	204.6	62.0	29.620	59.0
6 0	15.18	59.5	148.2	211.3	71.6	29.930	57.0	13 0	12.25	61.0	157.0	207.0	61.0	29.620	58.5
7 0	15.25	61.8	147.0	209.5	71.1	29.949	59.1	Oct. 19.							
8 0	15.23	64.0	147.0	210.2	71.0	29.893	59.3	1 0	13.33	54.5		198.4	53.0	29.712	44.1
9 0	17.35	65.5	140.5	208.2	70.5	29.941	59.5	3 0	13.24	52.5	155.4	198.9	51.0	29.764	44.0
10 0	17.24	65.0	147.5	206.4	57.6	29.968	57.8	4 0	13.28	53.0	151.7	201.7	52.0	29.767	46.2
12 0	15.04	61.6	152.8	188.0	63.5	29.905	47.3	6 0	13.04	56.0	147.0	202.7	61.0	29.667	50.5
13 50	15.34	58.5	153.2	196.8	59.3	29.963	42.1	7 0	14.27	57.5	148.5	200.6	61.5	29.778	50.0
14 0	12.35	59.0	153.8	195.8	59.2			Term	day	omit	ted.				
14 10	14.35	60.4	154.0	196.6	59.1	29.959	41.5	Oct. 20.							
15 0	14.00	57.4	153.9	199.5	59.6	29.989	41.0	11 0	11.23	51.0	153.0	200.0	62.0	29.997	42.4
16 0	14.05	57.7	165.0	202.4	59.8	29.988	37.2	Oct. 21							
17 0	15.40	55.0	160.7	210.5	59.3	29.977	36.0	7 0	11.31	48.5	148.0	195.8	55.5	30.045	45.0
18 0	11.05	51.0	156.0	201.4	58.0	29.995	34.2	9 0	11.48	52.5	150.0	196.2	56.2	30.028	45.5
19 0	11.03	50.0	151.0	198.5	58.7	29.997	33.0	11 0	11.27	51.0	149.0	196.4	53.3	30.034	39.6
20 0	11.04	50.0	150.6	194.0	57.5	29.992	32.3	13 0	9.18	47.0	153.0	195.0	46.0	30.104	38.0
21 0	11.36	48.2	153.0	194.0	54.5	30.005	31.5	Oct. 24.							
22 0	10.14	47.0	152.5	192.6	52.5	30.008	30.5	1 0	6.23	37.6	146.9	188.7	37.2	30.020	35.9
23 0	15.42	46.0	156.4	194.1	51.9	29.978	30.2	1 50	7.13	40.0	152.3	191.2	37.5	30.036	41.5
Oct. 14.								2 0	7.23	40.3	151.5	192.5	37.5	30.016	42.2
24 0	9.15	46.0	155.0	195.5	54.0	29.983	29.5	2 10	7.36	40.5	151.8	193.5	37.6	30.009	43.0
1 0	15.32	46.3	153.0	197.5	54.0	29.994	33.0	4 0	10.17	45.0	152.1	196.9	46.0	30.005	55.0
1 50	9.43	44.0	150.5	190.7	54.0	30.357	35.0	6 0	11.25	52.5	149.5	200.5	53.4	29.983	63.0
2 0	8.35	44.0	150.6	190.8	54.0			7 50	14.02	54.5	150.5	199.0	57.8	29.907	63.0
2 10	9.37	44.0	160.2	190.7	53.5	30.377	37.0	8 0	15.19	54.3	151.0	199.0	58.4		
3 0	10.04	46.5	158.9	201.5	57.2	30.071	45.8	8 10	14.45	54.2	151.0	198.1	58.3	29.944	62.9
4 0	7.30	50.0	154.0	210.0	63.0	29.960	55.0	10 0	15.44	59.6	142.9	198.0	59.4	29.948	57.0
6 0	14.35	55.5	158.0	210.9	67.0	29.922	60.0	12 0	14.45	57.5	147.0	198.9	57.5	29.903	50.0
7 0	14.06	56.9	152.0	207.9	67.1	29.859	61.1	13 50	14.06	56.3	147.0	198.1	57.0	29.935	48.6
8 0	15.04	60.0	151.0	205.0	67.6	29.805	62.5	14 0	14.06	56.2	147.2	198.1	57.0		
9 0	15.48	62.5	150.0	202.7	66.0	29.827	60.5	14 10	14.12	56.3	147.2	198.1	57.5	29.926	48.5
12 0	15.22	61.0	148.0	200.0	60.5	29.829	51.0	15 0	13.16	55.8	147.0	198.6	59.5	29.926	48.4
13 0	14.48	61.3	150.6	199.0	63.0	29.839	49.2	16 0	14.32	55.5	150.0	201.1	62.4	29.915	48.5
13 50	15.45	58.5	149.0	198.5	59.5	29.865	47.8	17 0	13.28	55.2	144.0	202.0	63.5	29.899	49.8
14 0	18.12	58.5	150.0	199.5	59.7			18 0	13.33	55.5	146.0	203.2	64.2	29.840	50.0
14 10	15.25	58.5	150.0	198.0	59.5	29.861	48.0	19 0	13.33	55.5	143.8	203.4	65.0	29.754	51.0
15 0	14.24	58.5	150.0	200.0	60.0	29.730	49.0	20 0	14.02	56.5	151.0	202.0	65.0	29.785	51.0
16 0	15.26	58.5	156.0	200.0	61.5	29.638	51.5	21 0	14.02	56.5	148.0	203.0	66.0	29.760	50.0
17 0	15.24	58.5	156.0	201.0	62.5	29.632	52.0	22 0	14.02	56.0	157.0	202.5	66.0	29.776	52.0
18 0	14.24	58.5	153.0	201.0	64.5	29.635	53.4	23 0	13.37	56.5	158.0	202.8	66.0	29.698	52.0
19 0	15.26	58.0	152.5	203.0	64.0	29.436	51.5	Oct. 25.							
20 0	15.26	58.5	149.5	192.0	63.5	29.548	53.5	24 0	14.22	56.5	158.5	203.0	66.0	29.694	52.0
21 0	15.46	59.0	150.0	202.0	63.0	29.508	54.0	1 50	14.03	56.5	152.0	204.5	63.0	29.822	57.5
22 0	13.37	57.5	153.0	201.2	64.4	29.524	55.5	2 0	14.43	57.0	152.0	204.5	63.4		
23 0	14.30	58.4	154.0	201.5	65.0	29.405	55.6	2 10	14.44	57.0	151.0	205.0	63.2	29.801	59.0
Oct. 15.								4 0	16.09	60.0				29.796	66.0
24 0	15.38	58.5	153.0	202.0	65.0	29.506	58.3	4 30	16.30	61.5	149.1	210.0	64.1	29.734	66.8
Oct. 17.								6 0	18.30	65.5	146.7	210.0	64.4	29.602	68.4
2 0	13.45	53.0	153.0	196.0	52.0	29.579	52.0	7 50	17.15	65.7	147.0	208.6	66.0	29.634	62.9
3 0	14.35	55.0	154.0	198.0	53.7	29.913	56.0	8 0	16.25	65.6	146.0	207.9	66.0		
4 0	14.42	57.5	150.0	203.3	64.0	29.919	57.5	8 10	17.26	65.5	146.0	208.2	65.8	29.620	61.8
6 0	15.14	60.5	148.2	210.8	67.5	29.919	60.0	12 0	17.49	64.2	153.1	201.7	64.5	29.532	60.6
7 0	15.21	63.0	146.0	206.3	66.0	29.929	60.0	Oct. 26.							
8 0	15.01	62.6	146.0	203.6	65.5	29.919	60.5	1 50	14.18	52.5	154.6	194.0	50.5	29.747	45.0
9 0	13.41	62.5	135.3	205.7	64.3	29.962	59.4	2 0	14.17	52.5	156.2	193.4	50.5		
11 0	13.44	59.5	150.5	200.7	61.2	30.014	49.2	2 10	14.18	52.5	158.3	195.1	50.5	29.752	45.5
12 0	11.49	59.0	153.5	199.1	60.5	30.032	47.8	4 20	13.19	53.6	152.5	200.3	52.0	29.761	50.0
13 0	11.35	55.0	156.0	199.5	55.0	30.102	43.5								

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								Nov. 1.							
7 50	+12.41	56.0	147.0	198.8	55.7	29.763	50.5	h. m.							
8 0	12.08	56.0	146.8	198.3	56.0			24 0	+8 11	42.0	149.0	198.0	56.2	30.105	30.8
8 10	13.11	56.0	146.5	198.9	55.9	29.765	51.8	1 50	10.33	46.0	146.5	198.0	53.4	30.248	38.3
10 0	10.38	54.0	149.6	199.8	55.0	29.819	47.6	2 0	10.39	46.1	151.5	198.7	53.5		
12 0	11.15	54.6	153.2	203.3	56.1	29.859	41.1	2 10	10.03	46.4	152.0	200.0	53.3	30.056	40.1
13 50	11.40	51.7	156.0	202.8	60.2	29.859	37.0	4 0	11.08	49.0	151.0	201.0	56.5	30.029	46.8
14 0	11.20	51.6	155.0	202.9	60.3			6 0	13.26	53.5	149.0	202.6	63.0	30.035	55.0
14 10	11.22	51.5	155.6	201.8	60.4	29.861	36.5	7 50	15.35	57.5	135.5	200.2	62.5	29.833	58.5
15 0	12.21	51.3	154.7	201.8	60.0	29.852	35.5	8 0	15.35	57.5	135.4	200.3			58.0
16 0	11.42	50.5	154.0	201.9	60.0	29.884	34.5	8 10	15.35	57.5	140.1	200.2	62.5	29.844	57.5
17 0	11.24	49.0	154.9	203.0	61.0	29.902	33.5	12 0	12.44	56.3	152.1	197.5	67.6	29.935	49.4
18 0	11.01	48.2	152.4	198.8		29.870	32.8	15 0	13.47	54.0	155.0	195.5	53.7	30.062	43.7
19 0	10.35	47.4	148.6	198.1	59.9	29.862	32.1	16 0	14.38	53.5	152.0	197.5	54.8	30.039	42.0
19 50	9.35	45.5	149.9	200.6	58.9	29.897	30.5	17 0	13.27	52.0	147.0	199.0	54.3	30.110	39.5
20 0	9.36	45.5	149.9	200.0	58.9			18 0	13.47	51.5	147.0	200.0	56.0	30.079	40.0
20 10	8 11	45.5	149.7	200.1	58.8	29.883	30.2	19 0	13.32	50.6	146.0	201.0	55.1	30.069	41.5
21 0	8.21	45.1	149.7	201.2	58.4	29.933	29.9	20 0	13.07	50.0	135.0	199.0	54.0	30.111	42.0
22 0	10.11	49.5	151.0	199.2	59.0	29.915	32.0	21 0	14.49	50.5	141.0	198.5	53.5	30.104	42.0
23 0	8.27	43.0	142.4	202.8	59.4	29.912	27.0	22 0	13.48	49.7	148.0	200.0	55.5	30.064	42.0
Oct. 27.								23 0	12.22	49.3	148.0	200.4	58.0	30.117	42.0
24 0	8.14	42.3	143.7	197.8	58.6	29.943	28.0	Nov. 2.							
1 50	8.09	41.2	154.0	199.2	55.0	29.999	35.6	24 0	12 19	49.0	150.0	197.0	58.8	30.031	41.5
2 0	8.24	41.3	153.9	199.4	55.0			1 50	11.45	50.0	149.2	197.4	56.1	30.161	40.0
2 10	8.30	41.5	153.7	200.6	55.1	29.979	37.0	2 0	12.34	50.0	148.5	198.1	55.5		
4 0	10.21	42.0	146.0	197.0	61.0	30.020	45.4	2 10	12.35	50.0	148.5	198.0	55.5	30.164	40.5
6 0	13.29	54.0	148.5	205.8	66.0	29.974	50.7	4 0	12.23	51.0		206.9	67.2	30.031	45.1
8 0	14.30	56.5	145.5	200.3	64.2		51.0	6 0	15.47	56.6	144.0	206.0	70.8	30.028	49.0
8 10	14.31	56.7	145.8	200.6	64.0	30.185	50.8	7 50	16.14	60.4	147.0	202.1	68.6	30.065	52.4
10 0	13.19	46.5	149.9	196.7	60.0	30.091	47.2	8 0	16 10	60.6	147.5	203.8	68.4		
13 50	11.28	51.0	156.4	191.4	49.5	30.182	37.6	8 10	16 10	60.6	148.0	203.8	68.3	30.072	52.2
14 0	12.27	51.0	155.5	193.1	49.0			10 0	14.16	60.0	145.5	207.9	64.5	30.099	48.2
14 10	11.32	50.5	155.5	193.9	49.0	30.191	37.0	11 0	13.18	56.5	142.0	203.9	60.5	30.126	44.0
Oct. 28.								12 0	13.45	55.1	145.2	203.5	58.2	30.017	41.8
6 0	11.15	48.0					50.7	13 50	12.28	51.6	146.5		52.5	30.176	37.0
10 0	12.00	52.5	153.3	196.0	55.3	30.309	43.5	14 0	12.32	51.5	147.4			30.187	32.0
12 0	11.33	50.0	159.0	192.4	51.0	30.298	39.0	14 10	12.43	51.5	147.1				
14 0	9.43	47.0	162.5	195.0	46.0	30.317	34.0	15 0	11.25	50.0	147.5	198.5	49.0	30.177	35.0
15 0	9.43	47.5	151.5	194.6	44.5	30.330	34.0	16 0	10.49	48.0	145.7	197.5	48.0	30.191	32.0
16 0	9.46	45.0	148.2	186.7	43.0	30.321	32.0	17 0	10 00	47.0	145.0	198.5	50.0	30.288	31.0
17 0	9.31	48.0	154.5	189.1	41.5	30.273	31.5	18 0	9.00	45.0	145.0	201.0	54.0	30.235	28.0
Oct. 31								19 0	11.25	44.0	143.0	202.0	54.6	30.236	27.7
1 50	5 51	33.5	158.0	185.0	31.3	30.426	29.4	20 0	10 06	43.5	139.0	199.0	55.7	30.251	25.8
2 0	4.31	33.5	158.0	184.5	31.3			21 0	9 15	43.2	146.0	199.5	54.0	30.269	25.0
2 10	4.33	33.7	159.0	186.0	31.5	30.419	31.2	22 0	9.26	41.5	146.0	199.0	53.5	30.269	23.4
4 0	7.26	38.0		194.5	40.7	30.290	40.0	23 0	9.12	40.0	141.5	198.0	54.0	30.267	24.0
6 0	8.44	42.5	147.5	197.0	46.5	30.315	46.0	Nov. 3.							
7 50	10 18	46.0	148.0	195.5	49.0	30.250	46.0	24 0	7.00	38.6	140.0	198.0	54.5	30.343	23.7
8 0	11.02	46.5	148.0	196.0	49.0			1 50	7.38	37.6	143.4		52.0	30.303	28.5
8 10	10.36	47.0	149.0	195.2	49.0	30.249	46.0	2 0	8.03	37.4					
10 0	10.22	48.0	152.0	193.0	48.6	30.264	42.5	2 10	7.40	37.6	145.1			30.313	29.5
12 0	10.45	45.5	148.2	199.0	44.9	30.296	36.4	3 15	8.44	39.5	148.0	204.5	60.0	30.313	35.5
13 50	8 47	44.5	148.3	189.0	41.7	30.214	33.4	4 0	8.21	41.0	146.0	206.0	65.5	30.311	38.0
14 0	9.04	44.3	149.4	188.4	41.8			5 0	9.02	42.5	144.0	207.5	68.5	30.288	41.2
14 10	8.46	44.3	149.3	190.0	41.6	30.236	33.1	6 0	10.03	45.0	143.0	209.0	71.0	30.258	44.0
15 0	9.40	43.6	151.0	190.0	40.9	30.244	32.3	7 50	12.35	51.4	139.0	200.0	65.5	30.178	44.8
16 0	9.22	44.0	151.0	190.5	43.0	30.222	32.2	8 0	12.39	51.4	139.0				
17 0	9.47	44.9	147.8	192.3	45.2	30.225	31.8	8 10	12.47	51.5	140.0	198.9	65.5	30.101	45.2
18 0	10.28	47.5	147.7	193.5	48.2	30.203	30.6	13 50	9.49	45.4	144.2	192.9	46.2	30.180	33.8
19 0	10.06	45.7	157.3	192.3	46.9	30.147	31.5	14 0	9.04	45.2	144.0	193.0	46.2		
20 0	9.15	43.7	156.0	194.0	48.5	30.166	30.9	14 10	9.29	45.2	144.0	192.6	46.7	30.259	33.3
21 0	9.09	43.3	150.0	195.0	50.6	30.169	30.9	15 0	9.11	44.4	144.8	192.8	45.2	30.209	31.5
22 0	8.23	42.8	150.5	195.2	52.0	30.160	30.0	16 0	9.15	43.8	152.6	194.6	46.5	30.166	30.8
23 0	8.11	42.5	150.0	197.0	54.6	30.119	30.6	17 0	8.26	43.2	151.2	195.3	49.2	30.222	27.8

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
18 0	+8.11	43.5	150.1	195.9	51.2	30.222	27.2	20 0	+9.48	44.0	152.0	195.0	53.0	29.572	35.0
19 0	7.25	40.9	152.2	197.0	53.8	30.174	27.2	Nov. 9.							
20 0	7.02	39.9	153.5	197.4	53.9	30.163	26.9	1 0	8.02	42.0	156.0	192.0	49.0	29.685	36.0
21 0	6.27	39.1	154.5	198.2	55.0	30.128	25.1	1 50	8.44	42.3	158.0	192.2	48.0	29.692	37.0
22 0	6.26	38.7	146.2	198.8	54.8	30.130	26.2	2 0	8.43	42.4	155.5	192.2	47.8	29.696	
23 0	6.22	38.3	146.7	199.2	54.6	30.212	23.8	2 10	8.40	42.4	154.9	192.2	47.7	29.689	37.3
Nov. 4.								6 0	10.25	43.0	145.5	193.7	44.6	29.672	41.0
24 0	6.11	39.9	146.1	200.2	54.2	30.200	22.9	7 0	8.29	43.5	147.0	197.0	44.5	29.665	41.0
1 50	6.39	37.0	150.5	190.9	53.2	29.915	30.0	8 0			149.0	190.5	44.6	29.681	43.0
2 0	6.38		150.6	190.9	53.5			12 0	9.40	45.0	147.5	195.0	44.3	29.675	44.0
2 10	6.38	37.5	150.6	190.9	53.5	29.898	31.5	Nov. 10.							
3 0	9.45	43.0	150.1	200.7	64.3	30.160	39.5	0 50	10.29	43.5	134.4	197.9	43.0	29.674	34.5
7 50	12.36	53.5	147.9	203.4	62.6	30.065	49.3	1 0	10.30	43.5	134.5	193.0	43.0	29.667	34.5
8 0	12.21	53.6	147.6	203.6	62.5			1 10	10.33	43.5	135.7	189.9	43.0	29.672	35.0
8 10	13.00	53.7	147.6	202.3	62.3	30.092	49.1	1 50	10.24	43.0	144.1	189.4	42.0	29.673	
10 0	12.10	52.2	144.1	195.5	55.9	30.105	30.0	2 0	10.22	43.0	145.9	191.2	42.0	29.672	36.0
12 0	9.45	44.0	150.3	201.6	65.4	30.151	39.6	2 10	10.18	43.0	148.4	192.6	42.0	29.674	
13 50	10.15	48.0	144.2	193.1	49.0	30.073	37.5	6 0			139.6	211.0	65.0	29.635	48.2
14 0	10.17	47.8	144.4	193.2	48.5			7 0	12.15	55.0	144.0	207.2	62.0	29.647	48.0
14 10	10.44	47.0	144.6	194.6	48.0	30.060	36.5	12 0	10.32	47.5	149.7	199.7	46.0	29.698	36.0
15 0	9.34	46.2	144.5	193.5	46.7	30.005	35.4	12 50	9.09	47.5	155.7	201.7	47.0	29.794	34.0
16 0	9.11	44.5	144.0	191.5	46.2	29.975	33.5	13 0	9.07	47.5	155.0	202.6	47.5	29.794	34.0
17 0	9.11	44.0	146.0	195.0	48.5	30.090	32.0	13 10	10.28	47.5	155.2	203.8	47.5	29.786	34.0
18 0	9.22	42.6	145.0	196.0	59.6	30.083	31.1	13 30	10.35	47.3	158.0	204.0	49.5	29.746	33.5
19 0	9.22	42.4	144.0	197.0	49.8	30.101	30.5	14 0	9.46	47.0	157.0	205.0	53.0	29.771	33.5
21 0	7.17	40.2	145.0	197.0	49.7	30.076	29.2	15 0	7.23	44.5	158.5	202.5	54.0	29.801	32.0
22 0	7.25	39.3	143.0	195.0	48.3	30.073	29.0	Nov. 11.							
23 0	6.32	38.6	146.0	195.0	47.7	30.121	30.6	1 0	6.01	38.5	148.6	191.7	39.0	29.795	35.0
Nov. 5.								1 30	6.02	38.0	146.6	195.4	39.0	29.793	37.5
24 0	6.16	38.6	147.0	194.0	47.2	30.102	31.5	1 50	6.03	39.0	147.0	196.5	41.0	29.771	38.0
1 50	6.03	38.5	156.2	196.0	46.1	30.094	37.9	2 0	6.45	39.0	147.3	195.1	41.0	29.754	38.0
2 0	6.16	38.5	157.5	196.5	45.9	30.092	38.5	2 10	6.44	39.0	147.2	195.3	41.0	29.758	38.5
2 10	6.18	38.7	157.0	197.0	46.0	30.092	38.9	7 0	9.42	46.0	146.2	200.7	57.0	29.796	46.0
Nov. 7.								9 0	8.19	46.0	148.6		55.0	29.881	43.0
1 50	10.48	48.0	157.6	194.9	45.4	29.753	43.7	12 0	9.33	45.0	144.2	195.9	52.0	30.277	36.5
2 0	10.48	48.0	157.3	195.6	45.5	29.774	44.8	13 0	9.07	45.0	146.0	198.0	52.0	30.146	35.5
2 10	10.49	47.2	158.9	194.7	45.4			14 0	9.03	45.0	141.0	199.5	56.0	30.045	35.0
4 0	12.04		151.5	200.5	51.0	29.759	53.0	15 0	8.13	44.5	141.2	201.2	59.0	30.020	33.4
5 0	13.05	53.0	149.0	200.5	58.5	29.625	56.0	Nov. 12							
7 0			145.0	200.0	58.0			1 0	4.25	36.5	145.0	198.5	54.5	30.022	26.5
10 0	12.25	54.0	150.0	196.0	55.2	29.793	51.0	1 50	5.06	37.0	143.0	201.2	55.0	30.107	30.0
12 0	12.27	52.6	152.7	196.2	53.5	29.782	47.0	2 0	5.07	37.0	142.5	201.2	55.0	30.110	34.0
15 50	12.05	50.0	152.8	194.5	51.5	29.742	46.0	2 10	5.16	37.0	141.5	207.5	55.5	30.119	34.5
16 0	12.00	49.5	152.6	194.2	51.0	29.744	45.5	Nov. 14.							
16 10	11.04	49.0	153.0	194.0	50.0	29.735	44.5	2 0	6.21	39.0	141.5	189.9	37.5	30.017	36.4
Nov. 8.								4 0	7.40	40.1	148.7	192.3	39.0	29.989	40.5
24 0	10.30	47.0	153.6	191.0	47.0	29.651	43.0	7 50	8.46	43.0	148.3	190.8	43.0	29.841	43.8
1 0	11.00	48.5	154.5	193.5	47.0	29.603	45.0	8 0	8.44	43.1	148.5	191.0	43.0		
1 50	11.37	48.4	156.1	195.5	47.0	29.574	44.0	8 10	8.42	43.3	149.0	190.5	43.0	29.833	43.2
2 0	11.37	48.4	156.0	195.7	47.0			10 0	8.05	43.4	145.2	190.5	42.6	29.806	40.9
2 10	11.31	48.2	156.0	195.6	47.0	29.573	44.1	15 0	8.33	44.0	145.1	189.2		29.736	42.5
3 0	11.00	48.4	155.5	196.0	47.0	29.547	44.0	16 0	8.41	44.0	145.2	189.8	43.0	29.703	41.0
5 0	11.03	48.0	149.0	197.0	48.0	29.446	45.0	17 0	8.40	44.0	146.2	192.1	47.5	29.658	40.2
6 0	9.28	49.0	147.0	195.8	47.0	29.416	44.5	18 0	9.04	45.0	146.2	196.0	55.0	29.649	41.2
7 0	10.06	51.0	147.1	197.8	47.0	29.387	44.5	19 0	9.20	46.0	146.0	199.2	58.0	29.671	41.0
8 0	10.13	48.3	148.1	191.6	47.0	29.334	44.0	20 0	9.03	45.5	146.5	198.3	56.0	29.683	40.0
9 0	10.06	48.0	149.2	192.2	47.0	29.316	42.5	21 0	9.03	45.5	146.8	199.7	56.0	29.719	39.0
12 0	12.03	46.6	151.3	189.8	45.0	29.199	40.0	22 0	8.42	45.0	146.5	200.7	59.0	29.741	38.0
15 0	9.32	45.0	152.5	187.0	43.0	29.442	34.0	Nov. 15.							
16 0	9.33	44.5	145.0	189.0	41.0	29.488	34.0	5 0	10.04			207.0	70.0	29.751	46.0
17 0	9.12	43.5	145.0	189.0	42.0	29.549	32.0	7 50	11.25	52.4	149.4	201.0	61.6	29.772	45.3
18 0	9.13	44.0	146.0	191.0	44.0	29.518	31.0	8 0	11.30	52.5	148.6	200.1	61.0		
19 0	9.40	44.0	147.0	192.5	49.0	29.539	34.0	8 10	11.22	52.6	150.1	199.3	60.0	29.800	44.6

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
10 15	+11.15	41.2	150.8	196.2	55.3	29.895	40.1	20 0	+5.27	37.0	151.0	203.0	55.0	29.913	29.0
Nov. 16.								21 0	6.06	38.0	151.0	203.0	55.0	29.861	31.0
4 0	5.49	36.5			36.5	28.985	37.0	22 0	6.40	37.0	148.5	203.5	60.0	29.740	34.0
8 5	6.36	39.6	144.0		40.0	29.819	38.5	23 0	6.22	38.5	152.0	203.7	56.6	29.718	35.0
13 4	2.35	30.7	152.2	186.0	29.0	29.954	27.8	Nov. 24.							
14 15	2.32	30.8	154.3	186.6	29.4	29.955	28.3	24 0	7.08	39.4	153.2	203.0	59.5	29.711	39.5
Nov. 18.								Dec. 6.							
17 34	12.18	54.0	145.0	202.0	57.3	29.018	54.5	{ 1 50	5.11	30.3	149.1	187.1	28.4	30.219	22.6
Nov. 19.								{ 2 0	5.04	30.3	149.3	189.9	28.0		
2 0	3.35	30.0	147.5	183.5	25.5	29.521	25.0	{ 2 10	5.04	30.3	150.5	188.9	29.3	30.215	22.6
Nov. 21.								3 0	4.44	29.6	150.9	190.8	31.0	30.217	23.2
{ 2 50	2.32	28.4	152.5	182.0	24.8	29.949	24.8	4 0	4.10	30.3	150.7	194.9	38.8	32.500	24.3
{ 3 0	2.33	28.5	154.0	182.3	24.8			5 0	3.30	32.8	147.0	203.2	50.0	31.346	25.0
{ 3 10	2.33	28.5	153.0	183.2	25.0	30.061	25.8	6 0	10.04	33.0	146.5	202.7	55.0	30.174	25.0
4 0	4.40	31.2	148.5	195.8	45.2	30.122	31.0	8 0	5.39	35.5	147.0	201.8	48.0	30.192	26.0
{ 7 50	8.42	42.8	166.7	196.0	47.5	30.048	37.5	9 0	6.06	35.6	148.2	200.6	46.0	30.271	23.5
{ 8 0	8.42	42.8	167.0	196.0	47.5	29.981	36.5	12 12	4.00	31.0		190.5	37.0	30.286	19.0
{ 8 10	9.04	43.0	167.0	196.0	47.5			16 0	3.00	27.0	138.0	200.0	42.0	30.292	16.5
10 0	6.44	41.6	146.0	197.0	44.2	30.102	33.1	17 0	3.00	24.0	139.0	198.0	43.0	30.245	16.0
12 0	1.39	39.2	150.2	200.4	39.2	30.509	29.7	18 0	2.40	27.0	139.6	197.5	42.5	30.250	16.0
14 0	2.13	37.0	148.0	203.4		30.112	25.0	19 0	2.38	27.5	140.5	202.3	50.0	30.248	17.4
14 30	3.05	37.0	160.7	205.9		30.210	24.0	20 0	vibrating		136.7	199.8	50.0	30.243	17.3
15 0	5.20	35.5	165.2	205.0	31.4	30.192	24.6	21 0	"		141.7	200.2	49.0	30.220	18.0
16 0	13.28	34.6	164.5	191.9	36.0	30.161	24.5	22 0	3.37	27.0	142.5	199.3	47.8	30.180	18.2
17 0	8.15	33.7	151.0	202.5	43.0	30.163	22.6	Dec. 7.							
18 0	15.37	33.5	156.7	202.0	47.6	30.141	22.5	24 0	3.00	27.0	140.8	195.7	45.0	30.127	20.0
19 0	10.20	33.5	155.0	196.0	49.5	30.159	20.3	{ 1 50	4.14	27.4	145.1	197.8	43.0	30.098	22.3
20 0	15.47	31.7	122.4	227.7	50.0	30.149	19.8	{ 2 0	4.14	27.4	143.6	197.0	43.8		
21 0	11.26	31.2	141.2	208.2	50.3	30.146	18.8	{ 2 10	4.21	27.4	142.9	198.0	43.4	30.102	23.0
22 0	6.43	30.6	132.4	202.5	51.0	30.142	17.9	3 0	3.20	27.5	140.2	200.0	45.5	30.088	23.4
23 0	4.24	30.5	144.2	199.2	50.3	30.157	17.0	4 0	3.35	33.0	145.9	201.3	46.1	30.133	24.7
Nov. 22.								5 0	3.32	28.5	143.2	203.1	45.0	30.086	26.8
24 0	4.25	30.3	146.5	198.4	50.0	30.167	18.2	6 0	4.01	30.0	143.0	201.6	46.0	30.034	29.5
{ 1 50	6.03	34.0	137.9	201.5	44.3	30.174	20.0	10 0	vibrating		148.0	205.0	49.5	30.053	28.0
{ 2 0	5.35	34.0	136.5	201.7				11 0	5.02	34.5	147.2	203.8	47.0	29.966	26.3
{ 2 10	5.26	34.0	136.2	201.9		30.158	22.0	Dec. 8.							
4 0	4.39	38.5	140.0	207.0	53.9	30.032	29.0	1 0	2.48	27.6				29.966	25.2
6 0	6.47	37.0	146.0	201.5	55.0	30.149	33.0	{ 1 50	3.49	28.2		191.6	28.0	30.018	26.8
8 0	9.04	43.5	147.5	200.5	51.2	30.126	36.0	{ 2 0	4.18	28.2	149.7	191.6	28.0		
10 0	8.03	43.3	150.5	196.2	46.5	30.097	31.2	{ 2 10	4.13	28.3	150.7	191.7	28.6	30.015	27.7
15 0	4.34	34.1	157.4	192.7	33.0	30.105	20.6	5 0	4.13	30.0		190.3	30.0	29.985	31.7
16 0	4.17	33.6	160.6	194.0	33.0	30.152	19.2	6 0	4.20	31.0		195.4	31.0	29.900	32.0
17 0	7.14	32.5	169.0	181.0	37.7	30.143	18.6	6 45	4.31	31.7	145.0	194.3	32.5	29.887	32.0
18 0	6.27		159.0	190.0	41.6	30.130	17.8	7 0			145.0	194.9	32.5	29.887	32.0
19 0	5.05	31.4	155.0	197.2	46.0	30.143	17.6	8 0	3.42	31.5		198.0	31.0	29.916	30.2
20 0	4.14	31.2	152.0	202.0	50.0	30.068	18.0	9 0	3.48	32.0	145.0	194.0	31.0	29.913	28.2
21 0	4.40	31.2	144.1	200.0	50.6	30.131	17.2	12 0	4.00	32.0	148.0	191.0	31.0	29.882	25.0
22 0	5.56	31.6	147.0	199.0	50.5	30.115	18.0	15 0	4.31	31.5	151.2	190.0	30.0	29.780	30.5
23 0	5.21	30.7	134.0	206.0	51.1	30.148	19.0	16 0	5.00	33.0	145.0	192.0	32.0	29.593	30.5
Nov. 23								17 0	5.03	32.0	148.0	190.0	36.0	29.567	31.5
24 0	4.07	31.5	146.5	202.0	50.5	30.137	17.1	18 0	6.01	33.0	151.0	196.0	40.0	29.523	32.3
2 0	3.49	30.0	153.0	195.0	44.0	30.216	20.0	19 0	6.05	34.0	150.0	198.0	44.0	29.497	32.0
4 20	4.17	32.0	151.0	209.5	61.0	30.139	31.0	20 0	6.03	35.0	150.0	199.1	43.0	29.528	32.5
6 0	9.19	45.3	149.4	205.0	56.5	30.068	39.5	21 0	6.31	35.5	150.0	200.0	46.0	29.581	32.5
10 0	9.36	44.0	141.0	197.6	51.8	30.060	36.0	22 0	7.00	36.0	149.1	202.2	52.0	29.565	33.8
{ 13 50	6.34	40.0	158.0	196.2	43.5	30.113	29.0	23 0	7.16	36.5	149.8	203.9	56.0	29.564	34.0
{ 14 0	6.29	39.5	157.5	195.7	42.0	30.034	28.0	Dec. 9.							
{ 14 10	6.26	39.5	155.9	196.3	42.0	30.028	28.0	24 0	7.25	36.0	151.8	205.0	58.0	29.558	33.0
15 0	5.37	39.5	155.0	197.0	41.0	30.026	28.0	{ 1 50	8.24	37.3		206.5	57.0	29.519	32.7
16 0	6.09	39.5	152.0	198.0	44.0	30.007	28.0	{ 2 0	8.20	37.3		206.4	56.6		
17 0	6.02	38.5	151.7	200.5	51.0	30.010	27.0	{ 2 10	8.19	37.6		206.3	56.6	29.524	32.6
18 0	5.43	38.0	151.0	203.0	54.5	29.962	27.0	3 0	7.13	37.0	153.0	204.0	54.2	29.580	25.0
19 0	5.41	37.5	151.0	203.7	55.0	29.866	28.0	8 15	4.20	34.0	138.7	205.0	41.0	29.562	26.0

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
9 0	+3.09	33.6	137.0	203.1	40.0	29.592	25.0	17 0	+6.25	32.5	150.0	204.3	46.3	29.968	22.4
10 0	2.30	33.0	144.0	202.2	38.0	29.633	23.0	18 0	6.23	32.3	150.0	206.0	50.5	30.010	21.0
12 0	0.00	32.6	150.0	210.0	36.7	29.633	21.1	19 0	6.18	32.2	149.0	205.5	52.7	29.961	22.0
15 0	3.44	30.0	155.0	194.5	30.5	29.717	20.0	20 0	6.01	31.5	150.0	206.5	53.3	29.968	18.4
Dec. 10.								21 0	5.45	31.5	149.6	206.4	53.3	29.946	22.0
1 0	1.40	26.4	152.5	189.0	25.5	30.103	22.7	22 0	6.49	31.5	150.0	206.0	52.8	29.957	22.7
Dec. 13.								23 0	6.01	31.6	150.9	206.0	53.0	29.941	25.0
5 0	2.30	25.5	149.0	188.7	24.0	30.191	31.0	Dec. 22.							
5 50	5.35	14.0	150.0	180.3	10.5	29.148	10.0	24 0	5.34	32.2	152.0	207.0	54.5	29.947	21.3
6 0	6.20	14.0	150.4	180.0	10.5		10.0	1 50	5.17	32.6	154.1	205.0	51.3	29.854	30.0
6 10	7.25	14.5	150.8	180.2	11.0	29.196	10.0	2 0	6.00	32.7	154.0	203.5	50.9		
7 0	-1.14	15.9	148.0	188.5	13.1	29.665	19.6	2 10	6.01	32.8	154.0	202.8	50.8	29.845	30.3
7 50	+1.12	21.5	146.5	187.5	19.0	29.525	25.0	4 0	6.22	33.7	149.8	208.5	48.8	29.874	31.5
8 0	1.18	22.5	146.5	187.7	19.5	29.530	25.0	6 0	8.08	38.0	144.0	206.0	47.5	29.692	31.8
8 10	1.25	22.5	146.5	187.8	20.0	29.510	25.5	7 50	8.34	36.9	146.7	200.0	46.6	29.595	31.8
10 0	1.23	23.8	143.1	189.9	22.2	29.509	24.0	8 0	7.16	36.8	147.1	199.8	45.8		
12 0	2.13	25.0	147.0	192.5	23.0	29.524	24.5	8 10	8.00	36.8	147.3	199.7	45.7	29.599	31.8
13 50	2.17	25.5	144.0	192.5	24.0	29.524	23.0	12 0	9.47	41.5	155.5	202.5	51.0	29.403	33.0
14 0	2.17	25.5	144.0	192.3	24.0			13 0	9.20	41.0	156.0	202.1	49.0	29.452	31.0
14 10	2.17	25.6	144.1	193.0	24.0	29.524	23.0	13 50	9.01	40.5	155.8	203.4	47.0	29.472	27.5
15 0	2.19	25.8	143.5	193.0	24.5	29.504	19.4	14 0	8.35	40.5	155.4	204.0	47.0		
16 0	2.00	25.5	143.5	196.0	30.5	29.627	20.3	14 10	8.49	40.0	154.0	201.7	46.5	29.509	28.6
17 0	2.17	25.5	140.0	199.0	30.0	29.899	20.5	15 0	9.45	39.5	154.0	201.2	44.3	29.525	26.2
18 0	2.43	26.0	139.0	201.4	41.4	29.559	17.2	16 0	9.10	38.5	150.6	207.7	43.2	29.493	24.0
19 0	3.12	26.0	140.0	203.7	45.8	29.776	18.2	17 0	9.00	37.1	157.0	207.0	41.3	29.538	24.0
20 0	2.20	26.1	147.0	205.0	48.3	29.935	14.5	18 0	8.27	35.5	153.8	207.0	48.0	29.563	22.1
21 0	3.25	26.1	145.0	206.0	49.0	29.948	17.0	19 0	7.31	34.7	151.8	207.0	49.0	29.574	20.5
23 0	2.30	25.3	143.0	205.0	49.5	29.880	13.0	20 0	6.10	34.1	153.0	207.0	48.6	29.596	19.7
Dec. 20.								21 0	6.08	33.0	153.5	205.4	42.1	29.592	20.8
24 0	1.43	25.3	140.0	205.0	19.0	30.077	11.0	22 0	6.21	31.6	154.0	200.9	45.1	29.596	20.9
1 50	1.49	23.5	147.5	203.0	45.0	29.984	11.5	23 0	6.17	30.5	154.5	198.2	43.0	29.608	19.6
2 0	1.35	23.6	147.0	203.0	45.0			Dec. 23.							
2 10	1.11	23.7	147.0	203.0	45.0	29.986	12.0	24 0	4.41	28.5	154.0	199.0	41.9	29.704	16.8
4 0	2.42	24.0	152.0	206.0	47.0	30.001	19.0	1 50	4.08	26.5	153.7	197.5	37.5	29.733	14.0
7 50	6.48	36.4	147.8	206.3	53.6	29.982	32.2	2 0	4.02	26.3	155.5	197.5	37.0	29.720	14.5
8 0	7.02	36.6	148.0	206.4	53.5			2 10	3.25	26.2	155.5	196.7	36.5	29.743	14.3
8 10	7.46	37.4	148.2	205.8	53.2	30.010	32.1	4 0	2.47	26.2	153.9	204.5	42.1	29.769	19.1
10 0	7.29	35.8	150.0	204.2	47.6	30.040	27.4	6 0	4.13	28.5	148.4	202.7	45.0	29.770	18.0
13 50	6.31	33.0	152.0	197.2	38.7	30.017	22.2	7 50	5.35	32.5	148.0	200.9	48.5	29.790	21.2
14 0	6.09	33.4	153.0					8 0	5.40	32.8	148.5	200.4	48.0		
14 10	7.05	33.5	153.1	195.9	39.9	30.026		8 10	6.19	33.2	149.0	197.7	47.5	29.801	20.5
15 0	5.32	33.2	149.5	200.7	39.2	30.004	23.0	12 0	3.43	27.5	152.7	193.5	31.0	29.966	14.8
16 0	6.31	32.5	151.0	200.0	42.5	29.996	22.6								

The observations in March, 1842, which were accidentally omitted in their proper place, are introduced here.

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
Mar. 1.								h. m.							
1 50	+4.49	35.0	143.8	158.1	32.5	30.122	34.0	6 0	+11.37	52.7	133.8	158.5	70.0	29.393	64.5
2 0	5.25	35.4	140.6	158.6	33.2	30.104		10 0	13.03	56.7	136.2	158.0	68.5	29.511	57.2
2 10	5.06	35.5	141.0	158.5	34.2	30.095	35.0	12 0	11.48	54.7	138.4	156.9	63.5	29.642	49.0
Mar. 2.								13 0	12.50	54.5	139.0	156.9	60.0	29.676	47.0
1 50	6.47	40.6	136.1	158.4	41.0	29.640	39.2	14 0	10.30	53.5	139.5	157.9	59.5	29.687	45.0
2 0	7.04	40.8	136.8	158.3	41.0	29.638		15 0	11.24	53.0	139.7	158.5	59.1	29.684	45.0
2 10	7.19	40.9	135.6	158.4	41.0	29.624	39.8	16 0	11.15	53.0	137.5	158.9	60.2	29.705	43.2
Mar. 3.								17 0	11.01	52.3	138.1	158.1	60.6	29.636	42.7
1 50	9.12	46.4	142.7	158.1	45.2	29.569	44.8	18 0	11.03	52.6	138.0	159.1	60.5	29.626	41.5
2 0	9.19	46.4	143.0	158.3	45.2	29.554	45.0	19 0	12.27	52.3	138.4	158.2	60.0	29.617	41.0
2 10	9.20	46.5	142.5	158.2	45.2	29.558	46.4	20 0	11.00	51.3	138.5	157.9	58.8	29.618	40.6
Mar. 4.								21 0	10.23	50.0	138.7	158.0	57.2	29.623	40.2
1 50	10.38	50.0	141.2	158.1	48.5	29.659	52.7	22 0	9.37	48.5	138.7	157.8	56.3	29.626	38.8
2 0	10.30	50.0	141.2	158.5	49.0	29.664	51.8	23 0	9.45	48.5	140.8	158.1	55.2	29.654	38.2
2 10	10.37	50.0	141.6	158.7	49.0	29.658	51.2	Mar. 11.							
Mar. 7.								24 0	9.27	48.2	140.6	158.6	55.3	29.647	37.9
1 50	4.46	36.8	142.5	158.8	33.5	29.854	34.0	1 0	9.10	47.2	143.8	158.6	55.7	29.630	34.5
2 0	4.39	36.8	142.1	158.9		29.839		1 50							
2 10	5.03	37.0	141.2	159.0	33.5	29.849	34.0	2 0		46.3	142.9	157.6	54.0	29.657	
4 0	5.25	38.0	136.5	159.0	35.3	29.877	35.5	2 10	8.41	46.2	142.9	157.5	53.8	29.635	32.3
10 0	5.35	40.3	136.2	159.0	39.9	29.864	37.5	3 0	9.46	45.8	143.3	157.2	51.5	29.605	32.0
Mar. 8.								4 0	8.41	45.0	139.8	157.1	50.0	29.592	32.0
1 52	4.08	33.6	143.0	159.1	31.0	30.180	30.2	5 0	8.41	45.0	140.0	156.8	47.5	29.576	34.0
2 0	4.01	33.8	140.6	159.1	31.1	30.196		7 0	8.22	44.5	131.8	156.8	46.8	29.516	34.1
2 10	4.02	33.8	141.2	159.0	31.2	30.182	31.0	8 0	7.47	43.4	132.0	156.8	44.8	29.542	33.0
4 45			134.5	158.0	43.0	30.223	33.4	9 0	7.27	42.7	133.8	152.4	44.2	29.548	32.0
10 0	2.00	43.5	135.9	158.9	51.4	30.309	41.0	10 0	7.10	42.5	135.0	158.9	45.5	29.585	31.2
14 0	5.32	40.0	136.6	156.9	42.3	30.241	28.5	11 0	6.26	41.8	137.0	158.9	50.6	29.612	31.0
16 0	5.44	37.6	139.5	157.7	37.0	30.204	29.5	12 0	6.37	41.6	137.5	158.0	53.0	29.706	28.0
18 0	5.55	37.5	138.0	159.6	40.0	30.163	32.5	13 0	6.43	42.0	137.0	158.5	51.0	29.765	26.0
20 0	5.59	38.0	139.0	159.9	50.5	30.114	35.5	14 0	6.38	40.0	137.8	158.5	50.0	29.780	23.0
22 0	6.48	37.5	138.0	159.3	57.8	30.074	37.4	15 0	5.31	38.0	138.4	158.0	47.0	29.759	21.6
Mar. 9.								16 0	5.11	37.2	141.9	157.4	45.6	29.777	21.0
24 0	6.00	38.5	141.0	159.0	58.0	30.049	38.0	17 0	5.10	36.5	140.0	158.8	45.2	29.878	21.0
1 50	6.14	39.7	142.7	159.0	56.8	29.914	38.1	18 0	4.23	35.5	140.0	159.0	47.5	30.092	20.0
2 0	6.27	39.7	141.8	159.0	62.0			19 0	4.49	34.2	139.0	159.0	49.8	30.036	18.0
2 10	6.23	39.9	142.3	158.9	56.2	29.925	38.9	20 0	5.24	33.5	140.0	159.0	52.0	30.019	17.0
4 0	7.33	40.2	140.6	158.6	54.5	29.899	43.6	21 0	3.15	32.3	139.9	158.6	58.5	30.084	16.0
6 0	7.25	43.7	130.5	158.5	54.7	29.913	50.0	22 0	3.40	31.5	140.6	158.5	50.0	30.072	15.0
15 0	7.24	42.7	144.9	157.5	45.5	29.468	41.0	23 0	2.04	30.4	140.0	158.7	49.5	30.154	14.0
16 0	8.09	43.0	139.7	158.1	45.0	29.410	41.0	Mar. 12.							
17 0	8.06	43.5	140.0	159.5	48.5	29.404	42.0	24 0	1.37	29.6	141.9	159.0		30.176	12.8
18 0	8.48	43.6	140.0	159.5	54.0	29.434	42.0	1 30			143.0			30.250	15.0
19 0	8.19	45.0	140.0	159.5	57.5	29.453	42.5	1 50	1.22	27.6	143.5	158.2		30.263	15.0
20 0	8.16	45.5	139.0	159.2	59.0	29.434	42.5	2 0	1.26	27.7	144.5	158.2			
21 0	8.20	45.3	138.8	159.0	58.5	29.451	42.0	2 10	1.28	27.7	145.5			30.270	16.2
22 0	8.14	45.3	138.5	159.2	58.5	29.463	43.0	Mar. 14.							
23 0	8.15	45.4	138.7	158.9	58.5	29.447	39.5	1 50	2.05	30.1	143.9			30.066	32.5
Mar. 10.								2 0	2.20	30.2	143.5			30.058	
24 0	7.49	45.3	139.5	159.0	58.7	29.463	39.2	2 10	2.21	30.4	145.8			30.112	32.8
1 0	7.33	45.0	141.5	159.0	58.4	29.466	42.0	3 0	3.07	31.8	143.6	93.6	34.0	30.096	38.1
1 50	8.08	44.2	142.5	160.2		29.432	42.0	4 0	3.36	33.2	140.0	93.8	39.0	30.091	40.0
2 0	8.11	44.5	142.3			29.449		5 0	5.42	36.0	136.5	93.2	44.0	30.114	41.5
2 10	8.23	44.5	142.1	155.3		29.446	43.0	6 0	6.02	38.5	132.8	93.8		30.174	43.3
4 0	9.35	47.3	139.5	158.2		29.360	62.0	7 0	6.22	39.7	131.1	93.6		30.152	42.3
5 0	11.10	50.2	137.2	158.2		29.373	64.0	8 0	6.44	40.7	130.2	93.5	50.0	30.020	43.0
								9 0	6.36	42.2	133.0	93.3	49.5	30.026	43.7

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
10 0	+6 25	41 0	131.0	93.0	48 2	30.077	43.0	Mar. 17.							
11 0	6.10	40.2	137.9	92.7	47.0	30.046	39.0	24 0	+7.46	43.0	140.5	93.7	63 0	29.837	38.9
12 0	6.09	40.0	138.3	92.9	46.0	30.054	36.0	1 0	6.38	43.5	142.8	93.4	62 0	29.801	41.5
13 0	4.36	39.5	137.9	93.5	46.5	30.077	33.0	1 50	7.04	43.5	144 0	92.6	59.8	29.784	43.5
13 50	5.21	38.8	137.6	93.8	50.0	30.095	31.0	2 0	7.12	43.5	144.6	91.8	59.2	29.768	44.0
14 0	5.11	39.0	138.5	93.8	50.1		30.1	2 10	7.13	43.7	143.7	91.8	58.8	29.766	44.2
14 10	5.35	39.0	138.8	93.8	50.5	30.093	30.4	3 0	7.39	45.1	144 0	93.5	58.9	29.726	47.7
15 0	5.25	37.5	140.0	93.8	51.0	30.090	30.0	4 0	8.48	46.0	142.0	93.6	60.0	29.694	51.1
16 0			144.2	94.0	55.5	30.075	29.5	6 0	9.36	48.4	133.4	93.5	60.2	29.644	55.5
17 0	5.01	37.0	140.5	94.0	57.0	30.075	29.0	8 0	9.43	49.7	130.0	93.4	59.9	29.568	55.7
18 0	5.00	37.0	140.2	93.4	58.2	30.100	28.4	9 0	9.30	50.0	133.0	93.2	59.4	29.562	54.0
19 0	5.00	37.0	140.6	93.6	58.0	30.105	27.6	10 0	9.25	50.0	133.8	93.0	58.0	29.550	52.2
20 0	4.38	36.8	139.4	93.8	59.5	30.027	26.7	11 0	9.22	50.0	135.5	93.0	57.0	29.542	50.5
21 0	4.35	30.2	140.0	93.4	60.0	30.042	26.7	12 0	9.08	48.4	135.7	92.7	56.0	29.575	49.0
22 0	4.36	36.0	140.3	93.3	58.5	30.045	27.1	13 0	9.04	49.6	139.0	93.1	55.5	28.568	48.0
23 0	4.20	35.6	141.0	93.4	58.3	30.019	26.0	13 50	9.23	51.0	137.7	93.9	57.5	29.576	51.8
Mar. 15.								14 0	9.20	51.0	137.5	93.6	58.0	29.584	51.0
24 0	4.20	35.0	142.2	93.0	56.0	30.026	24.8	14 10	9.21	51.0	137.7	93.9	58.0	29.578	51.6
1 0	4.07	35.5	145.5	93.2	54.5	30.056	29.0	15 0	9.28	50.0	138.0	94.3	62.0	29.615	47.5
1 50	4.18	35.6	146.7	93.8	56.5	30.055	32.0	16 0	9.28	50.0	136.5	94.2	65.0	29.622	47.5
2 0	4.24	35.6	146.6	93.9	57.0	30.053		17 0	9.38	50.0	138.2	93.9	65.6	29.637	48.9
2 10	4.41	36.0	146.4	93.9	57.5	30.047	32.3	18 0	9.40	50.0	138.3	93.7	65.0	29.657	49.0
3 0	5.26	37.0	145.1	94.0	63.0	30.089	36.7	19 0	9.40	50.0	138.3	93.7	64.0	29.706	46.0
5 0	8.00	42.2	137.2	93.5	71.0	30.007	43.5	20 0	9.35	49.5	138.0	93.7	63.5	29.744	43.0
7 0	8.38	45.0	128.9	93.4	73.0	29.991	45.0	21 0	9.23	48.6	140.0	93.3	62.5	29.761	43.0
8 0	8.02	46.5	128.7	93.3	72.0	29.967	43.4	22 0	9.12	48.0	139.2	93.6	62.0	29.799	40.0
10 0	8.00	49.0	127.0	91.8	65.5	29.958	41.1	23 0	8.39	47.0	138.7	93.5	61.0	29.802	39.0
11 0	7.05	48.0	125.5	92.1	62.0	29.956	39.1	Mar. 18.							
12 0			128.1	91.3	58.9	29.966	36.5	24 0	8.20	46.5	141.0	93.5	61.0	29.835	38.0
13 0	7.41	46.5	138.1	91.5	55.4	29.972	33.7	1 0	7.48	45.5	143.0	92.5	59.0	29.957	41.9
15 0	8.13	44.5	140.1	92.2	51.7	29.975	35.0	1 50	8.28	45.5	144.3	92.5	58.0	29.963	42.5
16 0	8.10	45.0	139.0	93.7	54.0	29.935	33.0	2 0	8.25	45.5	143.7	93.2	58.0	29.964	43.0
17 30	7.47	43.6	138.5	93.2	55.0	29.975	34.3	2 10	8.40	45.6	144.1	93.2	58.2	29.972	43.8
Mar. 16.								3 0	9.40	47.0	143.0	93.5	59.2	29.986	44.6
1 0	5.48	39.1	146.9	92.5	50.5	30.107	31.2	4 0	9.18	47.0	140.5	93.6	61.0	30.007	47.0
1 50	6.05	38.6	149.5	93.5	50.0	30.115	32.2	6 0	11.03	50.4	132.0	93.5	66.7	30.017	49.4
2 0	5.40	38.6	148.8	93.5	50.0	30.111		7 0	11.19	51.7	130.5	93.6	68.5	30.006	50.0
2 10	6.02	38.6	151.6	93.5	50.0	30.113	32.3	8 0	11.47	52.8	132.2	93.7	69.0	29.980	50.8
3 0	6.45	38.5	153.7	93.6	50.2	30.133	33.7	9 0	11.40	54.0	133.0	93.4	68.2	29.977	50.0
4 0	7.06	39.2	145.2	93.8	52.2	30.144	35.9	10 0	11.33	54.0	133.0	90.7	66.0	30.000	49.8
5 0	7.17	41.0	136.0	93.0	55.0	30.144	37.5	11 0	11.28	53.0	137.0	93.1	64.0	30.001	48.3
6 0	8.44	42.4	133.8	93.4	56.5	30.129	39.8	12 0	10.28	51.6	136.8	91.8	60.0	30.037	42.1
7 0	9.07	43.4	124.5	93.0	59.5	30.078	41.0	13 0	11.27	51.0	136.0	91.5	56.0	30.034	39.0
8 0	8.12	45.0	125.5	93.5	63.8	30.075	42.5	13 50	10.15	50.0	139.0	92.5	55.6	30.052	38.0
9 0	7.28	46.5	125.7	93.8	67.0	30.073	43.5	14 0	10.15	49.6	139.2	92.5	55.6	30.052	37.6
10 0			127.0	93.8	67.5	30.084	44.0	14 10	10.22	49.6	139.0	92.7	55.6	30.042	37.0
11 0	5.54	47.5	154.5	93.0	64.5	30.218	42.8	15 0	10.07	49.0	139.0	92.7	56.0	30.036	35.5
12 0	6.25		133.9	91.6	61.5	30.092	36.1	16 0	9.25	47.6	139.2	92.6	55.5	30.048	34.5
13 0	6.25	46.0	136.5	92.0	57.5	30.101	33.6	17 0	9.03	47.0	140.0	93.0	54.5	30.038	33.0
13 50	6.15	44.4	153.1	93.0	56.5	30.085	32.0	18 0	9.34	46.0	140.0	93.0	50.0	30.004	31.0
14 0	6.27	44.4	153.1	93.3	56.5	30.093	31.7	19 0	8.19	45.0	140.0	93.7	55.5	30.035	30.0
14 10	6.37	44.4	150.6	93.4	56.6	30.088	31.7	20 0	8.01	44.5	140.0	93.7	57.0	30.033	29.0
15 0	8.08	43.5	155.0	93.9	58.8	30.082	33.0	21 0	9.05	44.0	147.5	93.5	56.5	30.071	29.5
16 0	8.21	43.0	145.1	93.7	60.0	30.038	37.0	22 0	8.00	43.0	146.0	93.2	55.0	29.974	30.0
17 0	8.00	43.0	132.0	93.3	59.5	30.005	37.0	23 0	7.25	42.5	143.0	94.0	55.0	29.950	29.0
18 0	8.00	43.5	148.9	93.4	58.0	30.003	37.0	Mar. 19.							
19 0	7.17	43.0	141.2	83.4	57.2	29.973	38.0	24 0	7.24	41.5	141.0	94.0	56.5	29.922	29.5
20 0	7.48	43.4	138.0	93.6	58.3	29.941	38.6	1 0	8.15	31.8	139.4	94.1	60.0	29.906	37.0
21 0	8.25	43.0	129.0	93.8	59.0	29.910	37.4	1 50	8.24	42.5	135.0	94.0	61.4	29.913	42.0
22 0	8.20	43.3	133.7	93.8	60.0	29.869	37.9	2 0	8.07	43.0	136.5	93.8	61.0	29.905	42.8
23 0	8.20	43.0	139.0	94.0	63.0	29.880	32.5	2 10	9.36	43.0	138.0	93.5	61.0	29.898	43.5

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
Mar. 21. h. m.								h. m.							
1 0	+4.49	35.5	145.1	96.0	32.0	30.013	28.0	6 0	+6.35	39.8	130.0	93.5	55.8	30.167	27.0
1 50								8 0	6.51	40.5	130.0	93.2	55.5	30.154	29.5
	4.21	35.2	144.2	93.1	33.5	30.011	30.3	9 0			146.0	93.2	51.4	30.210	19.5
2 0	4.22	35.3	143.4	93.0	34.0	30.030	31.0	Term day omitted.							
2 10	5.41	36.0	142.3	93.8	37.0	30.084	34.0	Mar. 24. 12 0	7.25	46.5	143.0	173.3	59.6	30.193	31.7
3 0	6.37	38.0	140.0	93.6	42.1	30.056	36.0	13 50	8.17	46.0	145.4	170.7	54.1	30.188	30.2
4 0	6.18	39.7	135.0	93.6	46.4	30.097	38.0	14 0	8.13	46.0	144.8	169.9	54.0		
5 0	7.15	42.0	134.2	93.5	50.0	30.147	41.5	14 10	8.16	45.9	144.3	169.0	53.9	30.192	30.0
6 0	8.10	44.0	134.0	93.6	53.5	30.076	44.0	15 0	7.37	44.8	138.0	170.7	52.0	30.187	29.4
7 0	8.22	45.0	133.0	93.8	55.5	30.012	43.0	16 0	7.19	43.5	140.0	171.0	54.0	30.170	28.8
8 0	8.12	45.0	133.0	93.8	55.5	30.010	43.5	17 0	8.20	43.0	137.0	171.4	57.2	30.156	28.3
9 0	7.26	43.5	137.0	91.8	49.0	29.979	36.0	18 0	7.44	42.5	137.0	171.8	59.7	30.160	28.0
10 0	7.21	43.4	149.3	92.5	47.0	29.982	34.9	19 0	7.00	42.0	138.0	173.8	60.0	30.114	27.0
11 0			146.5			29.977	34.4	20 0	6.37	42.0	138.9	174.9	60.0	30.103	28.8
12 0	7.16	42.8	141.7	92.2	45.5	30.062	34.0	21 0	7.48	42.0	133.6	176.7	60.1	30.081	30.0
13 50	7.21	42.6	146.9	92.3	45.2	30.018		22 0	8.06	41.5	134.6	175.5	60.0	30.082	30.5
14 0	7.20	42.7	138.9	92.3	45.0	30.055	33.7	Mar. 25. 24 0	6.13	41.0	143.8	174.5	60.0	30.076	31.7
15 0	6.27	42.0	139.0	92.6	44.2	30.055	33.0	1 0	6.11	40.4	146.0	174.6	59.0	30.065	33.1
16 0	6.29	41.4	138.0	94.1	48.5	30.062	31.8	1 50	6.24	40.5	145.7	175.5	57.0	30.015	35.0
17 0	6.27	41.2	137.9	94.2	50.0	30.062	31.9	2 0	6.19	40.5	145.7	174.9	56.2		
19 0	6.31	41.6	137.8	94.2	56.6	30.053	31.4		3 0	6.30		145.0	174.6	54.7	30.024
20 0	6.02	40.3	139.8	94.3	58.2	30.050	31.3	4 0	6.18	40.7	142.8	177.8	54.7	30.051	33.8
21 0	6.12	40.5	140.0	93.9	57.8	30.030	33.3	5 0	6.25	40.6	134.2	181.3	53.0	30.020	34.3
22 0	6.47	41.5	138.7	94.0	57.6	30.029	34.0	6 0	6.57	41.0	134.8	182.0	55.5	30.000	34.3
23 0	6.12	41.5	139.3	94.0	58.0	30.022	32.8	7 0	5.25	40.7	131.3	178.6	55.0	29.957	32.9
Mar. 22. 24 0	5.24	41.0	141.3	93.8	57.6	30.015	32.2	8 0	6.36	41.0	129.1	178.1	55.5	29.901	31.0
1 0	6.36	40.5	143.2	93.2	55.8	29.990	33.5	9 0	6.21	40.0	129.0	173.0	55.0	29.902	32.0
1 50	5.43	40.5	142.4	93.3	54.3	29.985	34.2	10 0	4.26	39.5	134.0	175.0	53.5	29.869	32.5
	5.49	40.5	142.2	93.3	54.2	29.973	34.3	11 0	4.14	39.5	136.0	166.0	50.5	29.820	33.0
2 0	6.09	40.5	142.2	93.3	54.1	29.979	34.3	12 0	4.23	39.5	140.0	166.5	49.0	29.798	33.5
3 0	6.48	40.5	139.8	93.2	53.5	29.986	35.3	13 0	6.36	39.5	142.5	165.9	45.0	29.848	34.5
4 0	6.48	40.5	136.2	93.7	52.5	29.972	35.0	12 50	6.36	39.5	141.7	166.4	45.0		
5 0	6.16	41.5	130.6	93.5	52.7	29.956	35.0	13 10	6.42	39.5	141.4	165.6	44.9	29.711	33.5
6 0	6.06	41.0	128.0	94.0	54.0	29.950	34.5	14 0	6.32	39.5	140.0	166.6	44.5	29.662	33.5
7 0	6.20	40.5	127.6	93.5	53.8	29.876	34.0	15 0	7.34	39.5	140.0	168.8	46.8	29.618	36.0
8 0	6.17	40.5	130.5	93.0	52.2	29.910	31.5	16 0	7.34	39.5	138.0	169.8	51.0	29.600	35.8
9 0	5.12	38.0	134.8	92.2	50.7	29.869	31.0	Mar. 28. 4 0	7.28	39.7	137.5	170.8	51.5	29.587	35.0
10 0	6.32	38.5	135.5	92.2	49.8	29.870	31.1	6 0	8.44	45.3	135.5	181.1	44.5	29.752	44.5
11 0	4.42	38.7	137.0	93.0	48.9	29.955	29.8	7 0	9.06	46.2	133.3	178.5	48.8	29.762	43.8
12 0	4.24	38.0	137.0	93.2	48.2	29.950	30.2	8 0	9.12	47.5	127.5	176.1	50.5	29.762	41.5
13 0	4.24	37.8	137.0	93.0	47.5	29.977		9 0	11.25	46.5	129.2	171.5	49.6	29.826	41.2
13 50	5.33	37.5	136.5	92.7	46.6			10 0	8.24	46.7	132.0	168.1	48.5	29.892	39.0
	3.21	37.5	136.9	92.8	46.5	30.012	31.8	11 0	7.31	46.0	132.0	159.0	49.0	29.859	37.5
14 10	4.20	37.0	139.5	92.1	45.0	30.017	30.0	12 0	8.45	45.0	136.6	172.7	52.5	29.963	36.0
15 0	3.43	36.5	148.9	93.6	44.8	30.025	27.8	13 0	8.10	45.5	137.6	172.6	52.0	30.029	34.0
16 0	4.31	36.0	138.0	94.0	46.1	30.048	26.5	14 0	7.40	44.5	138.2	171.2	50.5	30.042	33.0
17 0	4.00	35.5	143.5	94.1	48.5	30.053	26.0	15 0	7.30	43.5	138.0	172.1	50.5	30.095	31.9
18 0	3.21	36.0	141.0	94.0	50.0	30.053	24.0	16 0	7.04	42.7	140.0	176.0	54.2	30.101	30.0
19 0	3.40	36.0	140.7	93.6	49.0	29.911	24.0	17 0	6.46	41.5	139.8	176.5	52.0	30.128	29.3
20 0	3.23	35.0	140.5	94.0	49.0	29.905	24.0	18 0	6.30	40.7	139.8	174.7	50.2	30.143	29.0
21 0	3.18	35.0	140.6	94.0	50.5	29.939	22.5	19 0	6.14	40.0	138.5	173.0	50.5	30.139	29.0
22 0	3.19	34.0	141.1	94.3	54.0	29.927	20.0	20 0	6.10	39.6	138.8	173.2	50.3	30.133	28.5
23 0								21 0	5.45	39.0	138.5	171.2	49.5	30.158	28.5
Mar. 23. 24 0	4.46	34.0	133.2	94.0	56.0	29.982	20.0	22 0	5.29	38.1	139.8	170.5	48.5	30.174	28.2
1 0	4.47	34.5	144.0	93.8	55.0	30.130	22.0	23 0	5.22	37.5	139.0	170.1	47.6	30.185	28.5
1 50	4.13	35.0	147.2	93.9	54.2	30.125	23.0	Mar. 29. 24 0	5.22	37.2	142.2	171.0	48.0	30.188	28.3
	4.19	35.0	148.0	93.8	54.2	30.137		1 0	5.10	37.0	137.9	173.6	48.0	30.192	28.6
2 0	4.20	35.0	146.7	93.7	54.2	30.134	23.0		5.13	36.8	142.0	172.5	49.0	30.206	32.5
3 0	5.36	36.0	142.7	93.7	55.0	30.132	25.0								
3 55	5.52	37.0	136.6	93.1	56.0	30.131	27.0								
5 0	6.48	38.0	137.0	93.6	56.0	30.173	27.0								

Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.	Gottingen Mean Time.	V. F.	Att. Th.	Dec.	H. F.	Att. Th.	Corr. Bar.	Ex. Th.
h. m.								h. m.							
1 50	+5.33	37.5	144.7	174.2	50.0	30.218	32.5	13 50	+9.32	49.5	137.5	173.5	51.0	29.573	44.8
2 0	5.42	37.6	145.2	174.0	50.2	30.222	35.0	14 0	9.32	49.5	137.0	173.7	51.0		
2 10	5.39	37.7	144.7	174.5	50.5	30.216	36.0	14 10	9.32	49.6	138.5	174.1	50.8	29.563	44.0
3 0	6.49	40.0	144.0	180.5	52.0	30.217	45.5	15 0	10.12	49.2	143.5	173.5	50.0	29.571	42.9
4 0	8.40	43.0	139.0	184.7	54.0	30.223	44.0	16 0	10.06	49.0	146.5	176.2	50.0	29.550	40.6
5 0	8.26	42.7	132.0	184.0	57.0	30.167	47.5	17 0	9.26	47.0	138.8	176.7	53.3	29.529	38.0
6 0	9.35	46.7	130.5	182.0	59.0	30.147	47.5	18 0	9.05	46.5	136.5	179.2	57.0	29.514	36.3
7 0	9.35	49.0	125.0	185.4	60.1	30.159	43.9	19 0	9.32	47.0	134.0	180.2	59.5	29.513	35.0
8 0	8.41	50.2	127.9	181.9	59.8	30.154	43.2	20 0	9.30	46.0	136.4	180.3	60.0	29.517	32.5
9 0	10.19	50.4	132.0	177.5	58.8	30.138	42.0	21 0	9.55	46.0	136.0	180.0	60.5	29.514	33.0
10 0	10.16	50.3	133.5	176.7	58.0	30.057	41.0	22 0	9.49	45.0	136.0	177.8	59.9	29.516	32.0
11 0	9.37	49.0	134.2	175.6	56.0	30.048	41.0	23 0	8.19	45.0	137.0	178.0	59.5	29.524	31.0
12 0	8.45	47.3	136.1	172.6	52.5	30.088	39.0	Mar. 31.							
13 0	8.35	47.5	135.8	174.3	51.0	30.090	38.8	24 0	7.45	44.0	142.0	177.0	58.0	29.564	33.2
13 50	8.42	47.0	143.1	172.7	50.5	30.064	38.5	1 0	7.40	44.2	144.5	175.3	56.5	29.605	39.0
14 0	9.02	47.0	143.1	172.5	50.5			1 50	8.17	44.6	145.4	175.1	54.5	29.630	42.0
14 10	9.01	47.0	142.5	172.9	50.5	30.057	38.4	2 0	8.25	44.8	147.2	178.0	54.5	29.630	42.5
15 0	9.08	46.9	139.9	173.0	51.0	30.051	38.2	2 10	8.33	45.0	148.0	179.0	54.5	29.631	43.5
16 0	10.09	46.5	144.1	173.5	54.0	30.035	38.2	3 0	9.19	46.0	144.2	182.7	55.5	29.635	45.0
17 0	10.21	46.5	146.1	176.0	56.8	30.026	38.8	4 0	10.15	47.0	141.4	184.1	56.5	29.645	46.0
18 0	10.32	46.0	146.0	183.2	59.5	30.036	36.0	5 0	10.21	48.0	134.5	184.0	57.5	29.660	44.0
19 0	10.32	45.7	144.1	182.4	59.0	29.985	34.7	6 0	9.30	47.5	131.5	182.8	58.0	29.664	40.0
20 0	9.40	46.5	142.0	180.1	58.0	29.964	34.8	7 0	8.47	46.3	130.8	177.5	56.9	29.534	37.0
21 0	9.01	45.0	134.8	177.1	58.0	29.925	35.5	8 0	8.23	45.5	130.0	172.6	55.0	29.679	31.0
22 0	8.31	44.8	138.5	177.8	60.9	29.845	35.5	9 0	7.23	43.7	131.3	169.4	51.3	29.775	28.0
23 0	8.18	44.6	138.5	178.3	62.5	29.805	36.7	10 0	6.34	42.5	130.7	167.4	48.0	29.702	29.0
Mar. 30.								11 0	6.20	41.0	133.0	165.8	45.5	29.804	28.0
24 0	8.12	44.3	141.8	179.6	59.8	29.787	37.2	12 0	6.47	39.8	142.0	163.7	41.5	29.914	26.0
1 0	8.04	43.7	141.2	178.0	56.5	29.720	40.7	13 0	5.39	39.3	142.5	164.3	40.0	29.925	25.0
1 50	8.36	44.5	137.5	179.2	55.0	29.700	42.0	13 50	5.13	37.5	138.5	165.0	39.0	29.954	25.0
2 0	8.38	44.5	138.5	178.0	55.0	29.686		14 0	5.06	37.5	138.0	165.1	39.0		
2 10	8.41	44.5	139.1	178.1	54.6	29.697	41.3	14 10	5.01	37.5	137.6	165.8	39.0	29.979	24.8
3 0	8.49	45.0	141.5	178.2	53.0	29.669	43.5	15 0	4.38	36.0	140.9	169.0	40.5	30.003	23.8
4 0	9.04	45.0	138.0	177.2	52.0	29.553	44.0	16 0	4.19	35.3	138.0	169.0	43.0	30.055	23.0
5 0	9.29	46.5	131.5	181.9	52.5	29.656	51.8	17 0	4.14	34.5	138.5	169.1	43.5	30.102	22.8
6 0	9.40	47.0	126.0	182.2	53.6	29.561	52.0	18 0	4.02	34.0	138.0	167.4	46.0	30.091	22.0
7 0	9.45	48.4	131.0	178.0	55.0	29.433	53.5	19 0	4.45	33.5	139.9	170.9	49.0	30.101	21.6
11 0	9.12	48.8	136.9	173.3	53.5	29.516	47.0	20 0	4.37	33.0	139.0	169.9	48.5	30.114	21.0
12 0	9.23	48.6	135.5	173.7	52.0	29.471	46.5	21 0	3.45	32.5	135.0	170.0	48.5	30.166	20.1
13 0	9.32	49.5	136.5	174.0	51.7	29.480	45.8	22 0	3.34	31.8	138.0	169.3	50.0	30.174	19.0
								23 0	3.34	31.5	138.0	170.8	51.5	30.182	18.0

EXTRA OBSERVATIONS.

It has been the custom at the Cambridge Observatory, as elsewhere, to observe, at the shortest possible intervals, the magnetic elements, whenever symptoms of any great magnetic disturbance were discovered, or the presence of an Aurora made it probable that the Magnetometers would be unusually deranged. The following results of the extra observations made at these irregular periods may be of some value in determining how far such magnetic storms extend, what are their laws, and what, if any, is their connection with the Aurora. At such periods the observer has generally marked the extreme limit of every vibration of the Magnetometer, and noted the time as often and as accurately as practicable.

Gottingen Mean Time.	Dec.	Gottingen Mean Time.	Dec.	Gottingen Mean Time.	Dec.	Gottingen Mean Time.	Dec.	Gottingen Mean Time.	Dec.	Gottingen Mean Time.	Dec.
Nov. 18, 1841.		h. m. s.		h. m. s.		h. m. s.		h. m. s.		h. m. s.	
11 13 0	138 0 ¹	12 48 30	118 2	15 51 35	167 0	16 15 35	120.0 ²	16 33 40	46 0	18 36 0	105.0
11 22 0	122.0	12 49 0	112 2	15 52 30	150.0	16 16 10	118.0	16 34 20	48 0	18 37 20	107.0
11 25 0	138 0 ²	12 49 30	111 5	15 52 45	159 0	16 17 30	137 0	16 34 45	68 0	18 37 40	108.0
11 30 0	171.0 ³	12 49 45	110 7	15 53 0	148 0	16 17 35	124 0	16 35 0	43 0	18 38 0	106.0
11 35 0	155 0	12 50 0	112 0	15 53 15	151 0	16 17 55	140 0	16 35 30	54 0	18 38 23	110.0
11 40 0	150 0	12 50 30	111 0	15 53 33	137 0	16 18 35	133 0	16 35 55	75 0	18 38 37	108.0
11 45 0	140 0	12 51 0	112 3	15 54 0	140 0	16 19 21	115 0	16 36 10	59.0 ⁴	18 39 30	112.0
11 50 0	137 0	12 51 30	113 6	15 54 25	123 0	16 20 0	97 0	16 36 23	79 0	18 39 55	114.0
11 55 0	156 0	12 52 0	115 2	15 55 0	111 0	16 20 15	107 0	16 36 42	57.0 ⁵	18 40 32	112.0
12 7 0	143 0	12 52 30	116 3	15 55 27	106 0	16 20 30	78 0 ³	16 37 0	77 0	18 41 0	111.0
12 10 0	147 0	12 53 0	117 2	15 55 45	90 0	16 20 50	86 0	16 37 20	65 0	18 41 30	114 0
12 27 0	137 3	12 53 30	118 8	15 56 15	79 0	16 21 5	70 0	16 38 0	65 0	18 41 50	112 0
12 32 30	138 8	12 54 0	121 0	15 56 30	90 0	16 21 25	85 0	16 38 10	77 0 ⁶	18 42 0	114 0
	137 0	12 54 30	122 8		80 0	16 21 45	62 0		64 0	18 42 32	117 0
12 34 0	135 0	12 55 0	126 1	15 57 0	86 0	16 22 15	57 0		72 0	18 42 47	115 0
12 35 0	135 0	12 55 30	130 0	15 57 30	75 0	16 22 32	69 0		62 0	18 43 15	115 0
12 36 0	137 0	12 56 0	134 0	15 57 45	82 0	16 22 50	50 0		77 0	18 43 35	116 5
12 36 10	138 0	12 56 30	135 5	15 58 0	70 0	16 23 11	64 0	16 39 45	68 0	18 43 50	116 0
12 37 0	139 8	12 57 0	139 0	15 58 15	83 0	16 23 27	45 0	16 40 0	77 0	18 44 10	119 0
12 37 30	141 5	12 57 30	140 7	15 58 32	73 0	16 23 50	63 0	16 40 40	82.0 ⁶	18 44 30	118 0
12 38 0	139 5	12 58 0	143 0	15 58 50	85 0	16 24 10	53 0	16 42 32	101 0	18 44 50	120 0
12 38 30	138 3	12 58 30	145 8	15 59 0	78 0	16 24 27	63 0	16 43 0	109 0	18 45 21	123 0
12 39 0	136 5	12 59 0	147 2	15 59 30	89 0	16 24 40	76 0	16 43 30	116 0	18 45 40	121 0
12 39 30	134 3	12 59 30	150 5	16 0 0	94 0	16 25 10	47 0	18 30 15	95 0	18 46 10	124 0
12 40 0	134 3	13 0 0	152 2	16 0 30	97.0 ⁷	16 25 45	37 0	18 30 26	100 0	18 46 30	125 0
12 40 30	134 6	13 3 0	154 0	16 1 0	105 0	16 26 0	40 0	18 30 44	93 0	18 47 0	126 0
12 41 0	135 4	13 4 0	156 2	16 1 30	97 0	16 26 30	25 0	18 31 0	98 0	18 48 0	127 0
12 41 30	136 2	14 0 0	4	16 1 37	107.0 ⁸	16 26 40	41 0	18 31 20	94 0	18 48 30	128 0
12 42 0	137 0	15 46 0	5	16 2 0	100 0	16 27 0	18 0	18 31 39	98 0	18 49 15	127 0
12 42 30	138 0	15 47 30	151 0	16 2 15	111.0 ⁹	16 27 15	21 0	18 32 0	94 0	18 50 20	129 0
12 43 0	138 9	15 48 0	153 0 ⁶	16 2 30	104 0	16 27 33	8 0	18 32 19	98 0	18 52 20	130 0
12 43 30	140 0	15 48 30	158 0	16 2 50	114 0	16 28 0	6 0	18 32 40	95 0	18 54 0	130 0
12 44 0	139 6	15 49 0	151 0	16 3 5	107 0	16 28 50	19 0	18 32 55	97 0	18 54 20	129 0
12 44 30	138 9	15 49 20	158 0	16 3 25	115 0	16 30 0	40 0	18 33 21	99 0	18 54 40	128 0
12 45 0	138 0	15 49 30	148 0	16 3 45	109 0	16 31 0	50 0	18 33 43	97 0	18 55 5	127 0
12 45 30	137 2	15 49 45	165 0	16 4 0	116.0 ¹	16 31 15	44 0	18 34 0	99 0	18 55 30	123 0
12 46 0	135 5	15 50 10	155 0	16 4 30	118 0	16 31 43	58 0	18 34 30	101 0		
12 46 30	133 2	15 50 30	168 0	16 4 45	113 0	16 32 15	54 0	18 35 0	100 0		
12 47 0	129 0	15 51 2	169 0	16 5 0	118 0	16 33 0	57 0	18 35 22	103 0		
12 47 30	122 0	15 51 20	161 0	16 15 27	125 0	16 33 30	44 0	18 35 40	101 0		

¹ Bright shoots. ² Arch forms. ³ Disappears. ⁴ Bright arch. ⁵ Beautiful shoots. ⁶ Aurora shoots up brightly.

⁷ Aurora fades. ⁸ Shoots up again. ⁹ Ceases. ¹ Merry dancers. ² Colored. ³ Merry dancers up to zenith.

⁴ Fades. ⁵ Dances. ⁶ Still dances.

Gottingen Mean Time.	H. F.	Gottingen Mean Time.	H. F.	Gottingen Mean Time.	H. F.	Gottingen Mean Time.	H. F.	Gottingen Mean Time.	Dec.	Gottingen Mean Time.	Dec.
Nov. 18, h. m. s.	1841.	h. m. s.		h. m. s.		h. m. s.		h. m. s.		h. m. s.	
15 45 0	165.0	16 17 32	189.5	16 35 0	254.4		187.0	12 47 0	149.0	13 36 20	140.5
	171.0 ¹		204.0		241.2		187.8		139.5		147.5
	164.0	16 18 0	195.5		255.3	16 53 35	185.0		149.5		141.7
	168.0		204.0		244.8		186.0	12 48 0	140.0	13 37 0	146.5
	166.0		201.0		256.2	16 54 7	183.1		149.0		142.0
	164.0	16 19 0	205.0		246.0		183.7		142.0	13 37 30	146.0
	161.0		216.0		262.0	16 55 15	180.3		148.0		142.0
	154.0		205.0		248.5		182.8	12 49 20	140.0	13 38 30	146.0
	156.5		217.0	16 37 0	255.5		181.1		148.0		141.0
	145.5	16 20 0	206.0		240.1		183.8		140.0		148.5
	149.0		219.0		246.2		180.7		149.0	13 39 40	140.5
	144.5	16 20 30	212.0		232.2	16 56 40	182.6		139.0		147.0
	149.0		238.0		240.2		180.3		153.0		141.5
	148.0		230.5		225.0		181.0		135.0	13 40 30	147.0
	158.5	16 21 15	241.5		231.0		181.0		153.0		141.5
	153.5		234.8		220.8		180.7	12 51 30	134.5		147.0
	161.0	16 21 45	243.5		228.8	16 57 40	181.0		154.0	13 41 20	139.5
	172.5		243.0		221.5		179.2		135.0		146.5
	170.0	16 22 15	245.0		222.2	16 58 15	181.9	12 52 30	152.0		140.0
	176.0		238.0		225.2	16 58 22	181.5		135.5		149.0
	171.0	16 22 50	247.9		227.3	16 58 40	184.9		153.5		139.5
	176.5 ²	16 23 27	248.5		220.2		184.2		135.5		139.5
	174.0		239.0		232.0	16 59 15	187.0		152.0	13 42 50	149.0
15 57 0	182.5	16 24 15	241.0		219.0	16 59 33	184.8	12 54 0	139.5		139.0
	178.0		234.0		231.0		185.6		147.0		149.0
	184.0		240.5	16 43 0	221.6	17 0 0	185.5	13 16 0	141.0	13 43 40	141.0
	180.0	16 25 10	227.0		231.7		187.7		149.0		148.0
	187.5		234.5		220.2		186.0		141.0		143.0
	192.5		229.0		231.0		188.4		149.5	13 44 30	146.0
	184.0	16 26 0	232.1		219.0	17 1 20	188.1	13 21 0	141.0		140.0
16 0 0	192.2		231.5		217.0		189.8		148.0		147.5
	184.0		236.5		227.0		188.6		141.0		142.0
	181.0	16 26 30	228.0		210.6			13 27 20	152.0	13 47 30	147.5
	185.0	16 26 40	241.0		219.4	Dec. 27, 1841.			137.0		146.0
	194.0	16 27 0	234.0		208.0				149.0		142.0
16 1 0	186.5		244.8		208.0	12 37 20	149.5		140.2		144.5
	192.4		242.5		218.0		140.1	13 28 20	147.0		142.0
	186.5	16 27 40	255.5		208.0		147.0		142.5		147.5
	192.5		248.5		214.0		141.5		147.0	13 50 0	141.5
	186.0	16 28 15	262.0	16 46 25	201.5	12 39 10	147.0		141.0		144.0
	190.0		252.0		211.0		142.0	13 29 30	145.5		147.0
16 2 0	186.0	16 28 50	267.0	16 47 0	199.9		146.0		139.0		142.0
	186.5	16 29 20	268.2		207.5		139.9		148.0	13 51 0	145.0
	183.5		258.5	16 47 32	198.8		149.0		139.5		143.0
	184.0	16 30 0	266.5		204.5	12 40 50	140.0	13 30 50	149.0		155.1
	183.0		252.5	16 48 10	195.6		145.5		140.5		150.5
	183.2		363.0		201.1		142.5		149.5		155.2
	181.5				194.9	12 42 20	146.0		138.0		149.5
16 4 20	182.0		252.5		197.8		143.0	13 32 0	151.0		156.6
16 4 30	180.0		265.5		192.7		146.0		138.5		150.5
	178.0	16 31 43	258.2		199.8		142.0		149.0		152.9
	176.0		273.3	16 50 0	192.1		148.5		140.5		150.7
	177.0		261.2		195.1		139.0		146.5		154.1
	175.0	16 32 23	269.2	16 50 30	190.1	12 44 0	150.0		140.0		149.8
4 6 30	176.0		253.5	16 50 40	192.0		139.0	13 33 50	148.0		154.1
4 15 0	181.0		265.4		189.5	12 44 30	149.5		139.0		149.4
	194.0 ³	16 33 0	249.2	16 51 10	192.5		139.0		148.5		156.8
	178.0		259.0		188.5		151.0		140.5		149.1
16 16 0	195.0	16 33 30	245.8		190.2		136.5		148.0		154.1
	186.5		260.4	16 52 0	186.7		151.5	13 35 10	143.0		
	196.0 ⁴	16 34 0	241.7		189.8	12 46 0	137.5		140.0		
	197.5		261.5		189.0		151.5		142.0		
			241.0		189.0		139.0		146.0		

1 Brilliant shoots of Aurora.

2 Aurora shoots.

3 Brilliant Aurora dancing.

4 Purple shoots.

Gottingen Mean Time.	Dec.	Gottingen Mean Time.	Dec.	Gottingen Mean Time.	Dec.	Gottingen Mean Time.	Dec.	Gottingen Mean Time.	H. F.	Gottingen Mean Time.	H. F.
Jan. 2 1842.		h. m. s.		h. m. s.		h. m. s.		h. m. s.		h. m. s.	
23 47 55	162.0	0 3 40	123.0	0 21 39	152.0		142.0		139.2		142.0
23 48 20	121.0	0 4 3	159.0	0 21 57	131.0		148.0		139.5		132.6
23 48 35	164.5	0 4 20	124.0	0 22 12	151.0	1 27 0	143.0	Jan. 3.			141.3
23 48 56	119.0	0 4 40	160.0	0 22 28	132.0		147.0	24 0 0	142.0		135.0
23 49 9	165.0	0 4 58	123.0	0 22 43	152.0		144.0		137.3		141.8
23 49 23	118.5	0 5 17	163.0	0 23 2	138.0		148.0		144.3		135.2
23 49 41	167.5	0 5 31	121.0	0 23 22	157.0		143.0		136.0		140.0
23 49 58	115.5	0 5 49	163.4	1 11 0	140.0		146.0		146.8	24 18 0	135.0
23 50 20	167.0	0 6 4	121.0		148.0		143.0		133.0		141.0
23 50 35	117.0	0 6 25	161.3		142.0	1 28 0	147.0	24 2 10	146.0		133.6
23 50 51	166.0	0 6 40	125.0		145.0	1 38 0	145.0		134.0		142.0
23 51 16	117.7	0 7 0	157.8		142.0		147.0		145.0		134.5
23 51 28	164.0	0 7 20	128.0		144.0		145.0		135.0		141.0
23 51 41	121.0	0 7 35	158.3		143.0	Jan. 2,			146.0	24 20 0	135.0
23 51 51	163.0	0 7 51	125.0	1 13 0	146.0	1842.	H. F.		135.2		139.5
23 52 9	119.0	0 8 10	162.0		142.0	23 48 0	140.0		141.5		137.5
23 52 19	162.0	0 8 39	121.0		147.0		139.0		138.2		139.0
23 52 32	162.3	0 8 47	161.5		142.0		140.0		143.0		137.3
23 52 56	124.9	0 9 2	124.0		147.0		137.0		138.5		140.0
23 53 18	157.0	0 9 11	160.0		142.0		144.2		143.0		136.0
	124.0	0 9 40	125.0		149.0		135.0		137.0		141.5
23 53 40	155.0	0 10 0	158.0	1 16 0	140.0		145.0		144.0		135.0
23 54 0	124.5	0 10 12	125.0		151.0		135.5		134.5		140.0
23 54 15	160.0	0 10 31	160.0		139.0		144.5		142.7		136.5
23 54 30	122.0	0 11 59	123.0		150.0		134.3		135.0		133.0
23 54 47	162.0	0 12 18	163.5		140.0		145.5		146.5		143.0
23 55 4	121.0	0 12 36	118.0		149.0		135.0		134.0		132.0
23 55 19	162.0	0 12 55	165.5	1 17 0	140.0		146.0		145.8		143.0
23 55 34	120.0	0 13 11	119.0		150.0		135.0		134.3		135.0
23 55 52	163.0	0 13 28	165.0		140.0		144.0		143.0		142.0
23 56 13	120.5	0 13 42	118.0		150.0		136.0		138.0	1 8 0	136.5
23 56 32	160.0	0 14 0	165.5		142.0		142.0		143.0		139.0
23 56 50	124.0	0 14 18	120.0		148.0		140.0		134.6		136.0
23 57 3	159.0	0 14 38	164.0	1 18 30	140.0	23 53 0	140.0	24 9 35	142.0		141.0
23 57 25	123.7	0 14 52	119.5		149.0		142.5		132.5		136.0
23 57 38	157.0	0 15 11	162.0		141.0		136.0		144.0		140.0
23 57 51	126.0	0 15 27	122.0		149.0		144.0		134.0	1 16 0	133.5
23 58 13	156.0	0 15 40	161.0		141.0		135.0		139.0		141.4
23 58 30	125.0	0 16 0	123.0	1 20 0	149.0		143.4		133.3		132.5
23 58 48	158.0	0 16 17	160.0		141.0		139.0		141.2		140.5
23 59 2	122.5	0 16 34	123.5		147.0		142.0		134.0		133.0
23 59 19	161.5	0 16 50	158.5	1 21 0	142.0		136.0		140.3		140.5
23 59 33	119.0	0 17 9	125.5		148.0		143.2		130.3		133.9
23 59 50	163.5	0 17 27	155.0		142.0		137.0		141.0		140.0
Jan. 3.		0 17 44	129.0		147.0		143.5		133.0		134.9
0 0 15	119.0	0 18 0	153.0		142.0		136.0	24 11 48	142.0		140.5
	165.0	0 18 17	129.0	1 22 30	147.0		146.0	24 13 5	131.5		133.0
0 0 41	118.5	0 18 34	154.0		143.0		136.0		141.3		139.0
0 1 1	165.0	0 18 51	130.0		148.0		144.0		135.2		134.5
0 1 22	117.0	0 19 8	152.0		143.0		135.0		142.0	1 20 0	140.0
0 1 39	164.5	0 19 27	134.0		146.0		144.5		135.0		133.5
0 1 51	121.0	0 19 38	147.0		145.0		134.0		143.0		139.0
0 2 13	163.0	0 20 2	136.0		147.0		145.5		133.0		134.0
0 2 33	123.0	0 20 20	147.0	1 24 0	144.0		136.3		142.5		138.0
0 2 51	160.0	0 20 40	136.5		147.0		143.3		133.0		136.0
0 3 10	124.5	0 20 56	148.0		143.0		137.0		143.0		138.0
0 3 28	159.0	0 21 18	134.0	1 25 0	147.0		142.0		133.0	1 22 30	135.3

Sky clear; wind N. W. Moon bright. No trace of Aurora. Corr. Barometer, 29.725. Ex. Thermometer, 24° Fah.

Gottingen Mean Time.	Dec.	H. F.	Gottingen Mean Time.	Dec.	H. F.	Gottingen Mean Time.	Dec.	H. F.	Gottingen Mean Time.	Dec.	H. F.
Jan. 15, h. m. s.	1842.		h. m. s.			h. m. s.			h. m. s.		
12 46 36	130.4	147.4	12 58 30	106.5	158.8	13 11 0	148.0	159.0		136.3	159.0
12 47 0	139.8	155.3	12 59 0	164.2	141.8		126.5	143.1		151.0	142.0
	127.0	148.6	12 59 30	106.3	155.5		148.9	157.7	13 24 0	135.0	156.0
	144.4	155.4		164.0	143.0	13 12 0	128.0	143.2		152.5	143.8
	124.6	144.0	13 0 0	106.0	156.0		146.0	157.9		134.8	156.1
12 48 0	146.8	159.8		106.0	145.3		132.0	141.0	13 25 0	152.0	143.9
12 48 15	123.0	140.8		163.2	155.6		143.0	158.2		134.2	157.0
12 48 30	148.0	162.1	13 0 30	107.0	145.2	13 13 0	134.1	141.8		151.6	143.1
12 49 0	121.2	141.3		161.8	153.1	13 13 30	140.6	157.2		138.0	155.9
	150.0	158.3		108.1	143.4		136.1	142.9	13 26 0		143.4
	120.8	144.8	13 1 11	159.5	155.2		139.4	158.0		148.0	155.1
	151.0	158.0		109.5	143.0	13 14 0	136.2	143.1		141.1	145.1
12 50 0	120.8	144.9	13 2 0	157.3	156.9		140.8	158.3	13 27 0	147.0	154.1
	149.0	159.2		115.2	141.9		136.3	139.9		142.0	146.0
	121.2	142.9		153.0	155.8	13 15 0	138.8	159.9		145.6	153.2
12 50 45	150.6	160.5	13 2 30	117.0	141.9		138.1	139.5		141.0	147.7
12 51 0	120.5	141.8		149.1	159.0		136.1	160.3		147.0	152.1
	153.5	158.8		141.2			136.1	140.3	13 28 0	140.0	146.9
	114.8	145.5	13 3 0	121.2	159.6		141.4	161.9		148.0	152.0
	160.0	156.5		150.0	140.4	13 16 0	132.8	138.8		139.1	148.0
	121.1	145.3		119.0	161.0		144.2	162.9		148.0	151.3
	162.8	157.0	13 4 0	151.9	137.9		132.0	138.1	13 29 0	138.8	149.0
	107.8	146.0		119.5	163.8	13 17 0	147.5	161.7		147.6	150.8
12 53 0	166.0	156.7		152.0	139.0		131.1	137.2		140.5	146.8
	107.2	147.0	13 5 0	119.4	158.2		148.0	162.8	13 30 0	146.0	152.1
		155.8		152.9	141.3		132.8	139.1		143.0	145.2
	164.0	144.2		119.0	156.0	13 18 0	146.8	159.2		145.0	154.6
	109.0	154.6		152.0	144.4		133.1	141.0	13 31 0	140.0	147.1
12 54 30	162.4	147.0	13 6 0	120.2	155.0		148.0	159.0		147.0	151.8
	109.5	155.3		151.8	145.4	13 19 0	134.8	143.8			147.3
	162.2	147.8		122.5	152.5	13 19 8	144.7	158.0		139.8	153.5
12 55 0	108.6	152.9	13 7 0	148.0	144.9		139.8	144.3	13 32 0	146.5	147.6
	163.8	148.1		124.0	153.9		141.5	155.0		139.8	152.8
12 55 30		153.2		146.8	145.1		140.8	145.9		144.8	147.7
	109.0	148.8		125.5	154.9	13 20 0	140.0	153.2		140.7	151.9
12 56 0	163.5	152.0	13 8 0	145.0	147.2		144.0	148.9	13 33 0	144.9	147.9
	110.0	151.0	13 9 0	126.2	152.2		138.0	151.1		140.9	150.1
		150.0		146.1	144.9		147.0	148.9		144.5	148.1
	162.5	151.0		124.0	155.2	13 21 0	136.0	154.0	13 34 0	140.0	151.5
12 57 0	108.0	153.0		143.2			149.0	147.8			148.3
	164.0	146.0		147.4	156.0		137.6	153.2		145.0	152.2
12 57 30	109.0	156.8		123.1	144.2		138.0	144.0		140.0	147.5
	163.0	141.3	13 10 0	148.8	156.9	13 22 0	149.5	156.1		147.0	152.5
12 58 0	107.4	159.2		124.7	140.0		135.0	141.7	13 35 0	139.5	148.4
	164.2	142.2		148.7	159.2			158.2	13 35 30	146.0	150.7
				125.2	140.9	13 23 0	150.0	148.3			

Thermometer Internal, 39.6; Ex. 26.0.

A Brief Abstract of the Observatory Records, giving some Account of the most conspicuous Auroras, and other Meteorological Phenomena that have been noticed and registered at Cambridge, during the Period embraced by the Magnetic Observations.

[The time is mean solar astronomical for Gottingen.]

November 18, 1841. — 13h. 44m. At this time a very beautiful Aurora was seen. The period of greatest brightness was 13h. 25m. The Horizontal-Force Magnetometer was then vibrating rapidly, and at 13h. 44m. it moved over ten divisions of the scale (201–212), but its disturbed movements gradually died away. At 13h. 50m. the Aurora had nearly vanished, leaving only faint traces of columns. The Declination-Magnetometer had its ordinary slow motion. The readings of the Horizontal-Force Magnetometer, for a short time, commencing at 13h. 47m. 30s., were:

200.5	196.0	195.8	204.0
204.0	202.0	200.5	201.6
198.0	197.3	195.8	205.8
204.0	201.0	1h. 56m. 205.0	202.0
199.0	196.3	199.0	205.0
200.5	201.3		

At 14h. 30m. there was observed in the north a large, bright arch of light, moving slowly westward, and also small, drifting spots of bright light near the horizon. At 14h. 40m. the illumination extended from the northern horizon up to 30° of altitude. At 17h. the Aurora was shining brightly again.

December 24, 1841. — At 12h. delicate shoots of Aurora nearly up to the zenith were visible. At 12h. 10m. the Aurora disappeared near Capella, but grew brighter in the zenith. At 12h. 12m. it disappeared from the zenith, and shone again in Auriga. At 12h. 16m. no trace of the Aurora could be seen; the Magnetometers swung over fifteen divisions of the scale. At 12h. 21m. the Aurora was invisible. The declination stood at 144.8; the Horizontal Force read 149–158.

January 4, 1842. — From 11h. 45m. to 12h. 15m. an Aurora was seen in the northeast and northwest. The Magnetometers were stationary, except in the interval from 12h. 2m. to 12h. 8m., when the Declination changed from 140.8 to 143.2, and the Horizontal-

Force Magnetometer from 151.1 to 153.3. At this time the Aurora had begun to fade.

January 5, 1842. — About 12h. an auroral arch was visible in the northeast, at the altitude of 8° , but it soon died away.

January 7, 1842. — At 16h. 14m. an arch of Aurora, 12° high, was seen in the north-northwest. The same arch, with another resting on it, at 20° altitude, was visible at 16h. 24m.; at 16h. 34m. the upper arch was partly broken; at 16h. 39m. a similar appearance was presented in the southeast. In both these arches stars were visible, though nowhere else, as it was cloudy.

January 9, 1842. — At 14h. 45m. a light appeared, shining through the clouds in the north. The following readings of the Declination were taken, commencing at 15h.:—137, 145, 138, 142, 141.5, 142, 138, 144, 137, 146, 142, 142.3, 142.1, 145, 138, 144. At 0h. 15m. of January 10, the Declination Magnetometer had the same irregular vibration; at all these times, the Horizontal-Force Magnetometer was moving apparently at random, from 139 to 149; the attached thermometer standing at 35° .

January 15, 1842. — During the extra observations of this day a feeble Aurora was noticed. A few columns and heaps of light were moving slowly from east to west. The Aurora still continued at the end of the observations. A diffused arch was visible in the north-northeast, whose apex was from 10° to 12° high. From 2h. 50m., when the arch was bright, till 3h. 5m., the Declination Magnetometer was observed, during which time it crept from 134 to 144, and then began to vibrate from 144 to 145.

February 11, 1842. — At 14h. a slight Aurora was observed.

February 19, 1842.

At 3h. the Barometer stood at	29.400, and the Ex. Therm. at	53.8	Violent rain, wind	S. W. 3.
4 0	29.387	53.8	" " " "	W.S.W. 5.
4 10	29.416		" " " "	"
4 20	29.393	52.3	" " " "	S. W. 3.
4 30	29.378	52.1	Moderate rain.	
10 12	29.520	40.0	Wane clouds, 1; wind	W. 2.
Feb. 20.				
7 10	30.290	29.0	Clear and calm.	

August 8, 1842. — At 20h. 0m. an auroral light was seen in the north.

MEANS OF THE DECLINATION.

1841.

1842.

Camb. Mean Time.	Gott. Mean Time.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	MEANS.
A. M.																
h. m.	h. m.															
6 36	0 0	147.7	145.5	143.5	142.8	144.0	140.1	141.1	155.7	158.2	157.9	160.4	155.8	153.5	148.0	149.6 149.7
7 6	0 30	149.1	146.1	142.7												
7 36	1 0	148.5	146.2	142.8			143.7	144.0	156.6	157.4	160.5		155.2	155.0	151.0	151.0 151.6
8 6	1 30	149.8	147.3	143.8												
8 36	2 0	149.3	146.6	143.4	144.8	144.0	143.2	141.3	154.2	158.0	160.3	158.6	156.6	155.8	149.4	150.4 150.7
9 6	2 30	149.0	146.0	144.9												
9 36	3 0	148.0	145.2	144.2			143.0	140.6	151.7	153.8	155.6		154.1	156.6	151.9	149.5 149.5
10 6	3 30	147.4	142.8	142.0												
10 36	4 0	147.1	141.4	139.8	140.4	141.2	138.8	136.2	147.3	150.4	152.1	148.3	150.2	152.1	147.5	145.2 145.7
11 6	4 30	145.7	141.1	138.9												
11 36	5 0	142.5	140.0	137.3			135.0	133.7	143.6	146.1	149.6		149.3	152.0	147.3	143.3 143.3
P. M.																
12 6	5 30	144.1	138.3	135.8												
12 36	6 0	143.1	137.7	135.8	135.6	137.1	131.3	132.1	142.6	144.8	145.3	143.5	147.7	148.9	145.4	140.8 141.3
1 6	6 30	143.9	138.0	134.7												
1 36	7 0	142.5	138.7	134.6			129.8	131.2	141.8	144.3	145.6		147.9	149.1	145.9	141.0 141.0
2 6	7 30	141.8	139.2	135.0												
2 36	8 0	142.7	140.4	136.7	136.8	136.3	130.4	131.0	143.7	145.5	144.1	147.6	148.2	148.8	147.5	141.4 141.7
3 6	8 30	144.8	140.2	136.2												
3 36	9 0	146.0	141.1	137.2			132.8	132.3	146.3	147.2	147.1		150.1	148.5	148.9	143.4 143.4
4 6	9 30	147.1	141.4	138.5												
4 36	10 0	148.3	142.4	140.8	139.1	137.5	134.3	133.0	147.4	150.3	147.3	153.6	151.6	150.6	146.0	144.4 144.7
5 6	10 30	147.6	142.8	141.4												
5 36	11 0	148.4	143.4	142.1			136.7	135.6	148.8	151.2	150.1		150.2	150.0		145.6 145.6
6 6	11 30	149.6	144.1	142.5												
6 36	12 0	150.1	145.0	143.7	140.2	139.9	138.4	137.0	149.8	151.8	149.8	153.0	151.2	151.7	149.2	146.5 147.1
7 6	12 30	151.3	145.1	142.7												
7 36	13 0	152.5	145.7	142.7			137.8	138.1	150.4	151.5	153.4		150.1	152.9	149.1	147.7 147.7
8 6	13 30	152.5	146.2	143.2												
8 36	14 0	152.8	146.7	144.5	142.6	141.5	139.1	138.6	151.7	153.1	149.6	151.6	153.9	152.1	149.2	147.6 148.3
9 6	14 30	153.5	145.5	144.1												
9 36	15 0	152.0	145.2	144.4			139.6	140.7	151.6	153.1	152.3		152.6	151.7	150.1	148.5 148.5
10 6	15 30	151.0	145.2	143.0												
10 36	16 0	153.8	144.9	143.1	143.1	143.4	139.7	139.1	153.7	153.8	150.7	153.1	151.8	152.5	151.4	148.1 148.6
11 6	16 30	148.3	145.0	142.9												
11 36	17 0	149.4	144.3	142.0			139.4	138.7	151.8	152.8	151.8		152.8	153.0	147.9	147.6 147.6
A. M.																
12 6	17 30	145.4	144.5	142.4												
12 36	18 0	146.5	144.5	142.5	141.7	143.0	139.0	138.5	151.3	154.1	151.0	153.0	153.4	150.6	149.5	147.0 147.4
1 6	18 30	145.8	143.2	141.5												
1 36	19 0	146.2	144.4	140.1			139.2	138.9	151.5	154.5	152.4		150.2	150.8	148.8	147.0 147.0
2 6	19 30	147.5	144.2	140.1												
2 36	20 0	150.1	145.2	142.3	141.3	142.9	139.1	138.5	151.9	154.2	151.2	151.6	151.2	150.9	147.0	147.0 147.4
3 6	20 30	149.3	144.7	143.0												
3 36	21 0	149.7	145.2	143.3			138.8	138.6	152.2	153.2	151.2		153.3	151.4	146.2	147.6 147.6
4 6	21 30	150.4	145.4	143.2												
4 36	22 0	150.3	146.2	142.4	141.0	141.5	138.7	139.6	152.8	153.5	149.9	155.9	151.1	152.6	146.5	147.3 147.6
5 6	22 30	146.5	145.6	143.7												
5 36	23 0	146.0	145.3	143.8			139.9	141.6	156.6	156.4	152.5		151.2	152.1	144.6	148.2 148.2
6 6	23 30	147.2	144.8	143.0												
Means,		148.0	143.5	139.2	140.8	141.0	137.8	137.5	150.2	152.0	151.3	152.5	151.6	151.8	148.2	146.5 145.8
Absolute Values,		9 28 38	33 3 35 9	33 1 31 10	33 52 36 44 36 3 35 8	35 49 35 12 34 46 34 48 37 26 34 21 34 52										

BAROMETRIC MEANS. 1842.

1841.

Camb.	Gott.	Mean	Time	Time	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	MEANS.
A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.
6 36	0 0 30	207	20 747	20 808	20 806	20 631	20 896	20 819	20 827	20 980	20 912	30 046	20 859	20 807	30 048	20 883	20 891	20 907
7 36	1 0 30	223	20 691	30 133	20 820	20 862	20 820	20 862	20 862	20 862	20 862	20 862	20 862	20 862	20 862	20 862	20 862	20 862
8 36	2 0 30	183	20 770	20 894	20 923	20 823	20 904	20 792	20 791	20 965	20 934	30 036	20 853	20 852	20 954	20 915	20 906	20 901
9 36	3 0 30	165	20 809	30 017	20 823	20 823	20 955	20 822	20 825	20 925	30 011	20 850	20 843	30 006	20 991	20 933	20 933	20 933
10 36	4 0 30	109	20 807	20 931	20 977	20 970	20 858	20 853	20 741	20 907	20 833	30 008	20 814	20 879	20 992	20 944	20 908	20 889
11 36	5 0 30	149	20 786	20 996	20 993	20 993	20 910	20 814	20 783	20 912	30 000	20 798	20 669	20 777	30 087	20 890	20 890	20 890
P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.
12 36	6 0 30	124	20 768	20 913	20 903	20 920	20 837	20 770	20 812	20 919	20 835	20 993	20 734	20 866	20 908	20 790	20 873	20 856
1 36	7 0 30	114	20 741	20 985	20 895	20 885	20 871	20 789	20 707	20 912	20 798	20 979	20 675	20 811	20 624	20 776	20 817	20 817
2 36	8 0 30	107	20 752	20 956	20 895	20 885	20 899	20 776	20 664	20 889	20 818	20 979	20 728	20 871	20 581	20 855	20 864	20 860
3 36	9 0 30	111	20 737	20 952	20 895	20 885	20 917	20 747	20 634	20 842	20 885	20 964	20 868	20 913	20 997	20 809	20 870	20 866
4 36	10 0 30	093	20 684	20 892	20 892	20 795	20 835	20 755	20 753	20 934	20 860	20 964	20 868	20 913	20 997	20 809	20 870	20 866
5 36	11 0 30	128	20 753	20 942	20 875	20 769	20 880	20 818	20 677	20 816	20 887	30 008	20 753	20 827	30 126	20 966	20 881	20 881
6 36	12 0 30	106	20 784	20 937	20 875	20 769	20 903	20 785	20 788	20 888	20 865	20 906	20 825	20 821	20 965	20 782	20 862	20 856
7 36	13 0 30	127	20 765	20 938	20 884	20 742	20 892	20 764	20 789	20 865	20 906	30 018	20 866	20 935	20 924	20 452	20 842	20 842
8 36	14 0 30	120	20 760	20 880	20 884	20 742	20 892	20 764	20 789	20 865	20 906	30 018	20 866	20 935	20 924	20 452	20 842	20 842
9 36	15 0 30	154	20 765	20 890	20 884	20 742	20 892	20 764	20 789	20 865	20 906	30 018	20 866	20 935	20 924	20 452	20 842	20 842
10 36	16 0 30	090	20 761	20 911	20 846	20 682	20 907	20 772	20 834	20 996	20 917	30 027	20 853	20 899	20 963	20 800	20 884	20 892
11 36	17 0 30	115	20 751	20 888	20 888	20 888	20 910	20 794	20 812	20 983	20 905	20 993	20 859	20 894	30 026	20 843	20 901	20 901
A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.
12 36	18 0 30	127	20 757	20 888	20 892	20 652	20 934	20 795	20 789	20 989	20 887	30 022	20 860	20 866	30 002	20 781	20 882	20 896
1 36	19 0 30	138	20 754	20 934	20 934	20 934	20 920	20 766	20 766	20 934	20 981	30 016	20 836	20 806	20 995	20 811	20 887	20 890
2 36	20 0 30	131	20 758	20 911	20 778	20 637	20 936	20 754	20 801	20 992	20 891	30 016	20 836	20 806	20 995	20 811	20 887	20 890
3 36	21 0 30	121	20 753	20 869	20 869	20 869	20 910	20 744	20 813	20 961	20 966	20 966	20 755	20 801	30 054	20 857	20 886	20 886
4 36	22 0 30	149	20 758	20 884	20 884	20 884	20 912	20 766	20 828	20 958	20 889	30 031	20 898	20 801	30 284	20 824	20 891	20 891
5 36	23 0 30	183	20 768	20 867	20 867	20 867	20 881	20 768	20 814	20 900	20 973	20 973	20 873	20 799	30 106	20 748	20 890	20 890
MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.	MEANS.
30 137	20 757	20 920	20 866	20 762	20 899	20 781	20 768	20 814	20 900	20 973	20 973	20 973	20 873	20 799	30 106	20 748	20 890	20 890
30 137	20 757	20 920	20 866	20 762	20 899	20 781	20 768	20 814	20 900	20 973	20 973	20 973	20 873	20 799	30 106	20 748	20 890	20 890

DIURNAL OSCILLATION OF THE DECLINATION.
1841.

WINTER MONTHS.										SUMMER MONTHS.					WINTER MONTHS.				
Gott M.T.	Camb. M. T.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mean	April.	May.	June.	July.	Aug.	Sept.	Mean.	Oct.	Nov.	Mean of all.	
	A. M. h. m.																		
0	6 36	5.2	7.8	8.9	7.2	7.7	10.3	7.8	10.1	13.9	13.9	13.8	16.9	8.1	12.8	5.6	2.6	8.8	
1	7 36	6.0	8.5	7.2			13.9	8.9	13.0	14.8	13.1	16.4		7.5	13.0	7.5	5.6	10.2	
2	8 36	6.8	8.9	8.8	9.2	7.7	13.4	9.1	10.3	12.4	13.7	16.2	15.1	8.9	12.8	7.3	4.0	9.6	
3	9 36	5.5	7.5	9.6			13.2	8.9	9.1	9.6	9.9	9.5	11.5	6.4	9.3	8.1	6.5	8.7	
4	10 36	4.6	3.7	5.2	4.8	4.9	9.0	5.4	5.2	5.5	6.1	8.0	4.8	2.5	5.3	3.6	2.1	4.4	
5	11 36	0.0	2.3	2.7			5.2	2.5	2.7	1.8	1.8	5.5		1.6	2.7	3.5	1.9	2.5	
	P. M.																		
6	12 36	0.6	0.0	1.2	0.0	0.8	1.5	0.7	1.1	0.8	0.5	1.2	0.0	0.0	0.6	0.4	0.0	0.0	
7	1 36	0.0	1.0	0.0			0.0	0.2	0.2	0.0	0.0	1.5		0.2	0.4	0.6	0.5	0.2	
8	2 36	0.2	2.7	2.1	1.2	0.0	0.6	1.1	0.0	1.9	1.2	0.0	4.1	0.5	1.3	0.3	2.1	0.6	
9	3 36	3.5	3.4	2.6			3.0	3.1	1.3	4.5	2.9	3.0		2.4	2.8	0.0	3.5	2.6	
10	4 36	5.8	4.7	5.2	3.5	1.2	4.5	4.2	2.0	5.6	6.0	3.2	10.1	3.9	5.1	2.1	0.6	3.6	
11	5 36	5.9	5.7	7.5			6.9	6.5	4.6	7.0	6.9	6.0		2.5	5.4	2.5		4.8	
12	6 36	7.6	7.3	8.1	4.6	3.6	8.6	6.6	6.0	8.0	7.5	5.7	9.5	3.5	6.7	3.2	3.8	5.7	
13	7 36	10.0	7.0	7.1			8.0	8.0	7.1	8.6	7.2	9.3		2.4	6.9	4.4	3.7	6.9	
14	8 36	10.3	9.0	9.9	7.0	5.2	9.3	8.4	7.6	9.9	8.8	5.5	8.1	5.2	7.5	3.6	3.8	6.8	
15	9 36	9.5	7.5	9.8			9.8	9.1	9.7	9.8	8.8	8.2		4.9	8.3	3.2	4.7	7.7	
16	10 36	10.3	7.2	8.5	7.5	7.1	9.9	8.4	8.1	11.9	9.5	6.6	9.6	4.1	8.3	4.0	6.0	7.3	
17	11 36	6.9	6.6	7.4			9.6	7.6	7.7	10.0	8.5	7.7		5.1	7.8	4.5	2.5	6.8	
	A. M.																		
18	12 36	3.0	5.8	7.9	6.1	6.7	9.2	6.4	7.5	9.5	9.8	6.9	9.5	5.7	8.1	2.1	4.1	6.2	
19	1 36	3.7	6.7	5.5			9.4	6.3	7.9	9.7	10.2	8.3		2.5	7.7	2.3	3.4	6.2	
20	2 36	7.6	7.5	7.7	5.7	6.6	9.3	7.4	7.5	10.1	9.9	7.1	8.1	3.5	7.7	2.4	1.6	6.2	
21	3 36	6.2	7.5	8.7			9.0	7.8	7.6	10.4	8.9	7.1		5.6	7.9	2.9	0.8	6.8	
22	4 36	7.8	8.5	7.8	5.4	5.2	8.9	7.3	8.6	11.0	9.2	5.8	12.4	3.4	8.4	4.1	1.1	6.5	
23	5 36	3.5	7.6	8.2			10.1	7.3	10.6	14.8	12.1	8.4		3.5	9.9	3.6	0.8	7.4	

MAGNETIC DECLINATION.

Date.	A.	B.	β .	C.	γ .	D.	δ .	E.	ϵ .	M.
1841.			h. m.		h. m.		h. m.		h. m.	
Oct. 26.	147.90	3.11	14 50	2.80	2 31	.80	6 13			
Nov. 1.	149.80	3.96	10 56	2.19	2 11	1.34	6 35			
8.	141.85	2.98	9 50	2.60	1 59	.72	4 1			+.050
15.	141.75	1.88	9 32	2.01	2 28	.89	6 28			
22.	141.37	3.15	10 56	2.55	2 59	.48	7 39			
29.	142.11	2.22	10 52	1.54	0 55	1.00	7 22			
Dec. 7.	141.60	2.05	10 13	1.68	1 35	1.10	3 16			
13.	142.10	1.90	12 12	2.52	1 53	.64	6 45			+.012
20.	140.97	1.22	15 0	3.46	1 15	.91	7 25			+.016
27.	142.00	2.82	11 29	1.95	2 5	.27	7 52			-.017
1842.										
Jan. 3.	140.80	2.54	10 28	1.98	1 52	2.22	0 11			+.001
10.	140.70	2.45	10 20	1.89	2 21	1.37	7 55			+.001
17.	141.28	2.70	9 29	3.31	1 23	1.38	1 39	1.05	4 44	-.035
24.	139.70	2.05	7 57	2.07	0 35	.47	6 47			+.063
31.	141.60	3.10	9 56	2.62	1 34	1.96	0 13			
Feb. 7.	139.02	1.45	8 12	2.40	0 4	1.95	7 38			
14.	144.10	5.24	9 13	2.40	0 34	1.63	5 3			-200
21.	141.10	2.28	6 6	1.21	0 49	.50	0 0			

The above are the co-efficients of the formula

$$D = A + B \sin(t + \beta) + C \sin 2(t + \gamma) + D \sin 3(t + \delta)$$

expressing the mean diurnal curve of the week commencing with the annexed dates; t being the time, counted from mean noon at Gottingen. M is the mean hourly change, independent of solar time. To the above formula may be added, then,

$$\pm M(t - 2h).$$

BAROMETER.

Date.	A.	B.	β		C.	γ		D.	δ		M.
1841.			h.	m.		h.	m.		h.	m.	
Oct. 26.	30.128	.029	4	43	.021	1	5	.006	1	7	+.001
Nov. 1.	29.712	.007	3	54	.022	11	28	.004	4	19	-.009
8.	30.068	.041	6	0	.010	11	37	.011	5	40	-.006
15.	29.519	.009	11	32	.008	1	37	.005	5	5	
22.	29.740	.023	4	28	.023	1	0	.008	0	0	-.001
29.	30.109	.034	2	8	.012	1	23	.017	6	13	-.007
Dec. 7.	29.846	.009	15	24	.014	2	16	.003	0	25	-.004
13.	29.781	.010	9	0	.024	0	0.5	.021	6	48	+.008
20.	30.207	.029	16	14	.008	0	28	.013	7	36	
27.	30.039	.036	3	24	.017	0	1	.014	7	32	+.00025
1842.											
Jan. 3.	29.915	.032	16	20	.018	1	15	.018	7	15	+.004
10.	29.814	.072	5	53	.029	1	2	.021	6	54	-.001
17.	29.869	.011	7	48	.022	0	48	.013	5	54	-.009
24.	30.181	.030	17	30	.009	10	52	.005	1	52	-.020
31.	29.834	.036	3	14	.017	5	32	.011	6	14	
Feb. 7.	29.926	.029	22	48	.019	11	10	.004	7	0	-.011
14.	29.714	.124	1	37	.037	2	13	.019	5	9	-.015
21.	30.193	.009	10	15	.012	11	50	.004	6	56	-.002

The above are the co-efficients of the formula

$$H = A + B \sin(t + \beta) + C \sin 2(t + \gamma) + D \sin 3(t + \delta)$$

expressing the mean diurnal curve, during the week commencing with the annexed date; t being the hour, counted from mean noon at Gottingen.

M is the mean hourly change, independent of solar time, to be applied by the formula

$$\pm M(t - 2h.).$$

THERMOMETER.

Date.	A.	B.	β		C.	γ		D.	δ		M.
1841.			h.	m.		h.	m.		h.	m.	
Oct. 26.	38.53	8.36	22	32	3.03	8	58	.12	4	27	+.18
Nov. 1.	50.90	6.85	22	36	4.29	10	45	.39	4	6	-.15
8.	33.12	4.06	23	3	1.64	7	57	.18	7	10	+.05
15.	33.80	3.74	22	12	1.45	9	30	.44	4	30	
22.	39.79	2.75	21	25	1.74	12	0	.61	4	56	-.09
29.	28.71	3.42	22	48	2.70	8	23	.92	4	12	
Dec. 7.	33.50	3.84	23	18	2.24	8	27	.63	4	27	+.26
13.	38.90	3.16	21	41	.99	7	30	.13	4	18	+.04
20.	22.70	3.38	22	44	.82	9	23	.22	1	24	+.04
27.	29.90	5.19	20	52	2.09	8	42	.64	2	59	-.04
1842.											
Jan. 3.	16.60	3.86	22	34	1.18	8	50	.22	3	36	+.04
10.	34.20	4.80	18	41	3.12	8	1	1.04	4	12	
17.	36.97	8.01	22	4	3.92	8	1	1.20	3	39	
24.	20.25	6.96	22	29	3.01	7	44	1.07	4	1	
31.	43.70	4.39	21	15	1.81	9	13	1.10	4	8	
Feb. 7.	28.70	5.96	21	48	2.94	7	48	.90	4	6	
14.	35.80	5.50	19	48	3.21	9	3	.53	0	29	
21.	24.27	4.73	21	52	2.08	7	50	.07	7	0	

The above are the co-efficients of the formula

$$T = A + B \sin(t + \beta) + C \sin 2(t + \gamma) + D \sin 3(t + \delta)$$

expressing the mean diurnal curve for the week succeeding the annexed dates; t being the time, counted from mean noon at Gottingen.

M is the mean hourly change, independent of solar time. It may be added to the formula, thus,

$$\pm M(t - 2h.).$$

part of the whole; that is, we have to measure effects, such as would be produced by shifting the centre of gravity through the *one-millionth of an inch*. It will be easily understood, from this statement, how great must be the effect of a minute disturbance of the relative parts of the instrument, or of inequalities in the bearing points of the axle; and experience has accordingly shown that it is altogether unavailable for the determination of changes of long period.

“The same difficulties, and from the same source, have been found to attach to the usual method of observing the *magnetic inclination*, and its changes, however refined the construction of the instrument. The sources of error seem, in fact, to be inherent in every direct process of determining the third element; and it is only by an *indirect* method that we can hope to evade them.* Of this character is the method now proposed.

“If a soft iron bar, perfectly devoid of magnetic polarity, be held in a vertical position, it immediately becomes a temporary magnet under the inducing action of the earth’s magnetic force, the lower extremity becoming a north pole, and the upper a south pole. Accordingly, if a freely suspended horizontal magnet, whose dimensions are small in comparison with those of the bar, be situated near, in a plane passing through one of these poles, it will be deflected from the magnetic meridian. The deflecting force is the induced force of the bar, which may be regarded as

* Two such indirect methods of determining the inclination have been proposed in Germany, one by Professors Gauss and Weber, the other by Dr. Sartorius von Walterhausen. That now suggested bears a close analogy, in principle, to the former of these; it differs from it, however, not only in the means employed, but also in the end in view,—the main object of the present method being the determination of the inclination-changes.

proportional to the energy of the inducing cause, that is, to the *vertical component* of the earth's force; while the counteracting force is the *horizontal component* of the same force, acting directly on the magnet itself, to bring it back to the magnetic meridian. Thus the magnet will take up a position of equilibrium, under the action of these opposing forces; and this position will serve to determine the ratio which subsists between them. When the right line connecting the centre of the horizontal magnet, and the acting pole of the bar, is perpendicular to the magnetic meridian, the tangent of the angle of deflection will measure the ratio of the two forces, and will therefore be proportional to the *tangent of the magnetic inclination*. Accordingly, by observing the changes of position of the horizontal magnet, so circumstanced, we can infer those of the inclination itself.

“But the iron bar may have (and generally will have) a certain portion of *permanent* magnetism, which will concur with the induced magnetism in producing the deflection; and it becomes necessary to institute the observations in such a manner as to be able to eliminate the effects of this extraneous cause. For this purpose we have only to invert the bar, so that the acting pole, which was uppermost in one part of the observation, shall be lowermost in the other. The induced polarity will, under these circumstances, be opposite in the two cases; and the acting force will, in one case, be the *sum* of the *induced* and *permanent* forces, and in the other their *difference*.”

In another communication made soon after, Professor Lloyd assures the Irish Academy of his confidence in his new instrument for observing *changes* of inclination, though he is distrustful of its value for giving *absolute* results. He justly remarks, that sources of error or disturbance, which mutually compensate when an

instrument is used for differential quantities, may stand out in their full magnitude in the other application of it. It appears, therefore, that the Inclination and the Vertical Component, which are functions of each other and of the Horizontal Force, are not yet susceptible of the same accurate determination which is claimed for the other elements of Terrestrial Magnetism. All the methods that have been used for observing inclination require so much time as to preclude the idea of observing directly momentary *changes* of inclination, and deducing from them corresponding variations in the Vertical Force. The Dipping Needle of Mr. Fox, a full description of which may be found in several scientific journals, furnishes a more convenient and exact method of determining dip and intensity than the ordinary Dipping Needle. An observation was made on the dip at Cambridge with one of these improved instruments, by Lieutenant Lefroy, of the Toronto Magnetic Observatory, which gave the mean dip at that place on October 3d, 1842, between 10h. 30m. and 11h. 30m., mean solar time at Cambridge, $74^{\circ} 19.5'$. An instrument of this kind is now placed at the Cambridge Observatory, from which more accurate observations on dip may be expected than have yet been made at this place.

The observations at Cambridge have been published chiefly with a view to their easy distribution, and not with the expectation of deducing from them alone any of the great laws of magnetic influence on our planet. However long and complete such a series of observations might have been considered formerly, it forms but a small part of the rich fund that has been or will be created by the recent coöperation of so many observers in remote parts of the earth, in Observatories stationed and appointed for this purpose, with all the wisdom and munificence which

come from the advice of learned societies and the patronage of government.

Any conclusive inference drawn from the phenomena at one place before they have been compared with contemporaneous observations elsewhere, made with the same kind of instruments, would be unsafe, and might be prejudicial to the truth. Still, an early publication, besides being the best mode of making what it contains generally accessible, may be of service in enlarging the experience of observers, and pointing out modifications in the system to be hereafter pursued. With a view, probably, to some such object, and in anticipation of a more comprehensive work at last, Colonel Sabine has recently published, in the name of the British Government, the observations which have been made at several of the magnetic stations *during days of unusual magnetic disturbance*. The period included is between March, 1840, and January, 1842. These extraordinary derangements in the earth's magnetism constitute that residual portion of the whole force which stands out after the periodical and secular changes have been compensated or eliminated. They may very properly, therefore, be separated from the regular changes, and become a distinct object of investigation. Perhaps they are destined, at a future time, to present an *experimentum crucis* of a just theory of Terrestrial Magnetism, induced from the ordinary facts of the science, and developed into some such remarkable consequence as a magnetic hurricane. A comparison of observations made at the different stations shows that a magnetic storm, although it may commence later, or be felt longer or more violently, at one spot than another, has the range of the whole globe for its play-room, and manifests itself, beyond doubt, in the most distant parts of the planet at the same

general period. In our former communication, this opinion was advanced on the strength of limited comparisons made between Cambridge and Toronto, and the authority of others who had given attention to the same point. But the proof is accumulated to a demonstration in the volume of Colonel Sabine, where we have the comparison of Toronto with Prague, in the heart of Europe, and Van Diemen's Land; and, on some occasions, with the Cape of Good Hope, St. Helena, and the wastes of the Southern waters. The practice of these Observatories has been, to watch the instruments with great care, whenever the changes exhibited any extraordinary extent or frequency. Mr. Sabine finds from the records, that out of twenty-nine principal disturbances, in 1841, the largest number manifested themselves under various modifications at the three first mentioned stations, and that the days of greatest disturbance in the year were the same at each. It is further observed, that on thirteen days out of the twenty-four days of unusual disturbance at Toronto, in 1841, the Aurora was visible, and that all these days were marked by magnetic disturbances at Prague and Van Diemen's Land. On the remaining thirteen days, the sky at Toronto was so far overcast that the Aurora could not have been seen, on the supposition that it existed. Mr. Sabine concludes that the Aurora, which has long been associated, in the time of its appearance, with *local* magnetic changes, must now be considered as more especially a *local manifestation* of those grand magnetic hurricanes which swell over large portions of the planet, breaking furiously upon certain favored spots, and acting nearly simultaneously in places widely separated from each other.

As some of the magnetic Observatories had not gone into full operation till the commencement of 1841, the comparison is limited to that year. It would have been desirable to have included Cam-

bridge in the same examination, but our observations for that year are too defective. The observations which are now published will furnish ample materials for this purpose, whenever the extra observations, made at the other stations in 1842, shall be published. Although I have not thought it advisable to bring the short time at the close of 1841, during which we had observations at Cambridge, into a public comparison with Mr. Sabine's Table, for fear of anticipating a more satisfactory examination of this question hereafter, I have privately done so, and will simply state, that October 26 seems to bear the traces of that disturbance which prevailed at Prague, Van Diemen's Land, St. Helena, and Toronto, on October 24, 25, and 26, accompanied at the latter place by the Aurora; that November 18 and 19, which were marked at all these other places by great disturbances and by the Aurora also at Toronto, are noted at Cambridge for the Aurora and extraordinary magnetic perturbations; and that December 3, 8, and 30, are remarkable with us, as they also appear by Mr. Sabine's Table to have been at two or more of the four other Observatories. It is particularly matter of regret that no observations were made at Cambridge on the twenty-fifth and twenty-sixth of September, 1841, that we might have seen whether the disturbing energy which swept for several days so large a portion of the globe, and which was felt at Toronto, Greenwich, Prague, Cape of Good Hope, St. Helena, Trevandrum, in India, Van Diemen's Land, and possibly at the Bay of Islands, in New Zealand, extended to our own latitude and longitude.

We have just had the pleasure of receiving, as a present from the British Government, a beautiful volume, containing the *regular* observations made at Toronto during the first magnetic campaign of 1840-1842 inclusive. This was the period originally comprised in the grand magnetic confederation. Three years, constituting the

second crusade, have now been added, so that the whole enterprise will not be concluded till the close of 1845. In this volume, which is published under the care of Mr. Sabine, the curves for all the Term-days are projected and placed side by side with the corresponding ones derived from the observations made at Cambridge and Philadelphia, on this Western Continent, and at Prague, in Europe. The simultaneous character of the American disturbances is exceedingly striking; the magnetic impulse is felt over the whole continent. But Mr. Sabine concludes, from the data before him, that the same derangement does not always sweep both continents; and this difference will appear on an examination of the beautiful plates with which the volume is enriched. We shall do him and the subject better justice to transcribe his conclusion in his own words.

“The correspondence which is so strikingly manifested in the fluctuations of the declination and horizontal-force in America, and which has its counterpart in the correspondence shown by the term observations at the different stations in Europe, is not found to prevail in any thing like the same degree between the curves of the two continents when they are exhibited in comparison. Nevertheless, indications are not wanting of participation in disturbances having a common cause. The character of the Term-day in respect to the degree of the disturbance by which the magnetometers are affected may always be derived alike, whether we view the European or the American curves: and instances are not infrequent of individual perturbations, common to both continents, having their culminating points at the same observation instant. These are sometimes disturbances in the same direction in both continents, and sometimes in opposite directions. On the other hand, there are perturbations, and occasionally of considerable magnitude, in the one continent, of which no trace

is visible in the observations on the other. The Term-day observations in this volume bear testimony, therefore, to the manifestation of simultaneous disturbances on the two continents; and from the volume of 'Observations on Days of unusual Disturbance,' we know that this simultaneity extends to stations much more remote from each other than Europe and America. In reviewing this result, we must combine with it the no less certain conclusion, derived from the discussion to which the disturbances occurring at the regular observation hours at Toronto have been subjected, that these interesting and remarkable phenomena exhibit at Toronto a systematic action connected with, and apparently having relation to, the hours of the day."

The period embraced in this communication has been deficient, it would seem, in that most beautiful of all meteoric phenomena, the Aurora. Several feeble manifestations of it are recorded, but only on one occasion did it assume its usual brilliancy in this latitude. This was on the 18th of November, 1841, when extra observations were made on the disturbed magnetometers. The Toronto observations show that a similar derangement, accompanied with a brilliant Aurora, occurred on the same day at that place. On the 15th of January, 1842, the same coincidence is noticed at Cambridge between the appearance of this mysterious visitant and the derangement of the earth's magnetic axis. It is satisfactory to find this additional confirmation to that law of dependence between the two phenomena, which has forced itself on the minds of meteorologists, however difficult or impossible even it has been for them to assign its definite character, or mould it to any precise mathematical expression. If facts are better than unaided speculation, and if induction is still the true method of our philosophy, we may promise ourselves that a rich harvest will come from the diligence and fidelity which are now

toiling in the various fields of meteorology, although we ourselves may not live to reap it.

The following Table is compiled from pages 52-3 of my former communication, and pages 139-40 of the present one. In a parallel column by the side of the Cambridge record, I have placed an abstract from the Toronto Meteorological Journal for the same date, that it may appear how often the appearance of the Aurora is simultaneous at both stations, and how often the failure is explained by the sky being overcast at Toronto. I have not given the precise hour and minute when the several phases of the Aurora were seen at the two places. In some cases, the coincidence of time is striking; in other instances, the dates assigned to the phenomena differ by several hours. I content myself with pointing out the general agreement as to the nights when the phenomena are witnessed, referring, for minuter comparisons, to my own paper and the volume of Col. Sabine. It seems, that on some of the days when the Aurora was seen at Cambridge, no entry of any kind is made in the Toronto journal. This fact, from which we infer fair weather at that place, is indicated by a straight mark in the line corresponding to those days.

1840.	CAMBRIDGE.	TORONTO.
April 24-5.	Slight Aurora.	—
May 28-9.	Remarkable Aurora.	Cloudy.
May 29-30.	Brilliant Aurora.	Brilliant Aurora.
June 26-7.	Aurora.	Cloudy.
July 4-5.	Aurora.	—
July 29-30.	Aurora.	—
August 19-20.	Aurora.	Aurora.
August 28-9.	Fine Aurora.	Fine Aurora.
October 22-3.	Aurora.	Aurora.
November 30-1.	Aurora.	Probably overcast.
1841.		
November 18-19.	Beautiful Aurora.	Brilliant Aurora.
December 24-5.	Aurora.	Overcast.
1842.		
January 4-5.	Aurora.	Overcast.
January 5-6.	Aurora.	—
January 7-8.	Aurora.	Overcast.
January 9-10.	Aurora.	Overcast.
January 15-16.	Aurora.	Aurora.
February 11-12.	Aurora.	Overcast.
August 8-9.	Aurora.	7-8 cloudy.

One word is necessary in regard to the barometric observations made at Cambridge. They have been corrected for temperature, and the data are furnished for the correction due to elevation, capillarity, and the constant instrumental error. But the result indicates not the pressure of the air merely, but the sum of the pressures of the gas and the vapor in it. Now it appears, from a paper which Mr. Sabine read before the British Association in 1844, that in many places, if not everywhere, and always, the changes in the amount of vapor in the air correspond in such a way to the changes in the true gaseous pressure that they are mutually masked so far as the barometer indicates them. In this way we account for that want of distinctness in the barometric curve (either the daily or the yearly one) which we find in the curves which represent the corresponding variations of temperature and the magnetic meridian. It seems from the Toronto observations, that when the vapor pressure is separated from the gaseous pressure, both are subject to regular mean daily and yearly fluctuations, which almost entirely neutralize one another when taken together, leaving a smaller residuum of change which exhibits, also, a less striking relation to the hour of the day or the season of the year. I may illustrate these remarks by the daily curve. The maximum of gaseous pressure occurs at eight in the morning, and the minimum at two or three in the afternoon: but the maximum of vapor pressure takes place at the last period, and the minimum at the former. Mr. Sabine further shows, that the periods of maxima and minima for vapor and gaseous pressure not only correspond in this way, but that they are the same as the times of maxima and minima for temperature and the force of the wind. In a word, the maxima and minima for temperature, force of the wind, and vapor pressure, are *all* found at the same general periods,

and these periods alternate with the times of maxima and minima of gaseous pressure, so that the maxima of the former nearly correspond to the minima of the latter. The diurnal march of the other three forces from maximum to minimum, and from minimum back again to maximum, are continuous, like that of the temperature, while the blending of the gaseous and vapor pressures in the mercurial column produce the apparent double maxima and minima of the barometer. This might be expected from the common dependence of the changes in the force of the wind, the amount of evaporation, and the oscillations of the atmosphere upon the antecedent changes of temperature. The Greenwich observations, as published in the volume for 1841, by Mr. Airy, confirm the deduction drawn from the Toronto observations. We thank Mr. Sabine for having so distinctly brought out this relation, and we allude to it here as showing the necessity hereafter of accurate and full hygrometric observations, from which we may deduce the amount of vapor pressure which must be applied as a new correction to the indications of the barometer.

In deriving correct and valuable mean results from the daily observations, there are two difficulties. 1. A single day of extraordinary disturbance may be sufficient to vitiate the true character of a whole month. I have endeavoured to diminish this source of error by discarding from the means those observations which were largely and notoriously warped by such abnormal influences. 2. It is important that each of the means should be derived from the same number of daily observations, made on the same days; otherwise it may happen, that a day, whose declination curve, for example, is regularly formed, but whose average value indicates a great easterly or westerly tendency, will be allowed to impart its own peculiar character to those hours when

observations were made on that day, and not to the other hours. No account has been made of this difficulty in the *monthly* means; but, in making up the *yearly* mean, two columns are placed at the left hand of the Table on page 141, the second of which omits the months of January, February, and August, when observations were made only every even hour; the other retains them. Of course, the hourly means derived from the whole time will give a more accurate mean daily curve of declination changes when taken from the extreme right column, than when drawn from the one next to it on the left. Similar remarks apply to the barometric means of page 142.

Concluding Remarks, explanatory of the Tables.

The moment of observation has been given in mean *astronomical* time, reckoned from mean noon at Gottingen. It is apparent that so many instruments as were under observation could not all be registered at the same moment by one person. The time, given in the first column of the Tables which contain the *ordinary* observations, belongs strictly only to the observations on the Declination. The Horizontal-Force Component was observed two and a half minutes *before*, and the Vertical-Force Component two and a half minutes *after* that time. The attached Thermometers were observed after their respective instruments. The Barometer and the external Thermometer may, with sufficient accuracy, be assigned to the same moment as the Vertical-Force Magnetometer. The three lines that are inclosed in braces make what is called a Triple Observation. This consists of nine magnetic observations, three upon each of the three instruments. The moment when each of these observations was made will appear

from the following Table, which may be regarded as representing the Triple Observations at 2 o'clock, on October 27, 1841.

h. m. s.	1	2	3	4	5	6	7	8	9
	V. 1 50 0	D. 1 52 30	H. 1 55 0	V. 1 57 30	D. 1 2 0 0	H. 2 2 30	V. 2 5 0	D. 2 7 30	H. 2 10 0

In the case of the *extra* observations, the time belongs, as nearly as it could be determined, to the observation which stands beside it.

One division on the scale of the Declination-Magnetometer amounts to .73 of a minute of arc, and one division on the scale of the Horizontal-Force Magnetometer amounts to 1.079 minutes of arc.

A *decrease* of numbers on the scale of the Declination-Magnetometer corresponds to an *increase* of Westerly Declination in the marked end of the instrument.

A *decrease* of numbers on the scale of the Horizontal-Force Magnetometer corresponds to a diminution in the amount of the Horizontal-Force Component.

After the close of the February Term-day, a copper bar was substituted for the Horizontal-Force Magnetometer, and the observations were continued with that until March 14, when a small steel magnet was added to the copper bar. Observations were made with this last arrangement until the commencement of the March Term-day, when the original Horizontal-Force Magnetometer was restored.

The Barometric Observations were made with one of Cary's mountain brass instruments belonging to Mr. W. Cranch Bond. The tube of this barometer had a diameter of .17 of an inch. The instrument was stationed, according to Mr. Bond's determi-

nation, at an elevation of about thirty-eight and a half feet above the mean high-water mark of Charles River, at Brighton Bridge.

These Observations have not been corrected for capillarity or elevation, but only for temperature. The correction for temperature, which was derived from Professor Schumacher's Tables, as published in the Report of the Committee of the Royal Society, reduces the observation to the standard of 32° Fahrenheit. Previous to each observation, the mercury in the cistern was adjusted to the proper level. Observations made at different times by Mr. Bond show that the instrumental error of this barometer, as compared with No. 57 of Newman, described on page 3 of a former paper, is .068 of an inch. The difference between this and .038 of an inch, the capillary correction, or .03 of an inch, must be *added* to Cary's instrument, when corrected for capillarity, to make it correspond with Newman. The Cambridge standard by Newman has already been compared with the standard of the Royal Society of London, as may be seen on the page just referred to.

Thus, the mean of all the barometric observations is	29.881
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Adding for the capillary correction,	0.38
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we have	29.919
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Adding difference between Cary and Newman, or	.030
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we have	29.949
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Now we have, as the mean of four daily observations on Newman, during the same period of time as that to which our own observations refer, by Mr. Bond,

29.937

Difference,	.012
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If we deduct this last difference from .030 we have .018 as the value of the correction to reduce Cary to Newman, and which we prefer to the former correction of .030 of an inch, because it

is derived from so long a series of observations. Indeed, another series of observations in 1842, by Mr. Bond, makes this correction only .019 of an inch.

Each observation on the external Thermometer is, in general, the mean of three separate observations on as many instruments, having different exposures, and calculated to eliminate, by their average value, whatever might be regarded as especially local and irregular.

The observations on the Horizontal-Force and Vertical-Force Magnetometers have *not* been corrected for temperature, but the readings of the attached internal Thermometers are published in a parallel column next to the magnetic observations. I hope, at some future time, to present the Horizontal-Force observations in a corrected state; and the means of this element, deduced from the whole series of observations. But the temperature coefficients are imperfectly known, and experiments must be made to obtain an accurate determination of these constants. Such experiments, and the calculation required for making the reduction, would make a greater demand on my time than my present leisure could meet. I also hope, on some early opportunity, to present the absolute values of the Horizontal and Vertical-Force components at Cambridge. The absolute values of the Declination have been given in the lowest line of the Table of Means on page 141. They were obtained from Mr. W. Cranch Bond's observations with a Variation Transit, made by Troughton and Simms. The observers have relied on Mr. Bond, throughout the whole operation, for their time and the adjustment of the instruments, so that we feel confident that no error has come from that direction. Acknowledgments are also due to Mr. Thomas Hill, who was at the time an undergraduate in the University, and who devoted much time and ability to this

enterprise. The coefficients contained in the Tables on part of page 143, and the whole of page 144, were calculated by Mr. Hill, according to the method of Professor Pierce, of which some account was given on page 44 of our former paper.

The instruments for these observations were furnished by the American Academy of Boston, and the buildings were paid for with funds raised by private subscription, with the assistance of Harvard University: but the whole labor of conducting the observations has been the voluntary contribution of those who have been engaged in it. Under such circumstances, it cannot be expected that our observations can compare, for accuracy or completeness, with those made at the regular Magnetic Observatories, by a *personnel* of five or more observers, who are commissioned and paid for giving their whole time and energy to this single object.

JOSEPH LOVERING.

CAMBRIDGE, May 1, 1845.

ERRATA.—The two observations on the Barometer at four and five o'clock on Dec. 6, 1842, are obviously inaccurate. I am not certain, from an examination of the original record, in what way the mistake was made, and what the true numbers should be, though I incline to think they should be 30.210 and 30.086. These observations would more properly have been omitted altogether; they crept into the printed copy from inadvertence.